

617.5302

J82
10



Library
of the
Academy of Medicine,
Toronto.
2269

Presented by

Dr. Rice Brown

1/2

VOL. X.—1896.

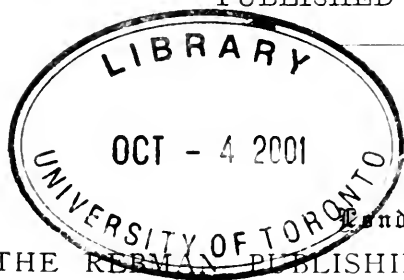
THE
JOURNAL OF LARYNGOLOGY,
RHINOLOGY, AND OTOTOLOGY;

AN ANALYTICAL RECORD OF CURRENT LITERATURE

RELATING TO

THE THROAT, NOSE, AND EAR.

PUBLISHED MONTHLY.



London:

THE REBMAN PUBLISHING COMPANY, LIMITED,

SUCCESSORS TO F. J. REBMAN, 11, ADAM STREET, STRAND.

AMERICAN AGENTS:

THE F. A. DAVIS COMPANY, 1914-16, CHERRY STREET, PHILADELPHIA, PA.

ENTERED AT STATIONERS HALL.

THE JOURNAL OF LARYNGOLOGY, RHINOLOGY, AND OTOTOLOGY.

Founded in 1887 by MORELL MACKENZIE and NORRIS WOLFENDEN.

EDITED BY

R. NORRIS WOLFENDEN, M.D. Cantab.,
JOHN MACINTYRE, M.B. Glasgow, F.R.S.E.,
DUNDAS GRANT, M.A., M.D., F.R.C.S. Eng.,

WITH THE ASSISTANCE OF

DR. SANDFORD (*Cork*), R. LAKE, F.R.C.S. (*London*),

AND WITH THE CO-OPERATION OF

DRS. BARON (*Bristol*), BETTMAN (*Rome*), BOTEY (*Barcelona*),
CARTAZ (*Paris*), BRYSON DELAVAN (*New York*), DODD (*Chicago*),
DRAISPUL (*St. Petersburg*), GRAZZI (*Florence*), GUYE (*Amsterdam*),
HICGUET (*Brussels*), MIDDLEMASS HUNT (*Liverpool*), HUTCHISON (*Glasgow*),
VALERIUS IDELSON (*Berne*), JOAL (*Paris*), KARWOWSKI (*Warsaw*),
A. B. KELLY (*Glasgow*), LACOEARRET (*Toulouse*),
LICHTWITZ (*Bordeaux*), JOHN N. MACKENZIE (*Baltimore*),
PROF. MASSEI (*Naples*), MEYJES (*Amsterdam*), E. MEYER (*Berlin*),
MICHAEL (*Hamburg*), HOLGER MYGIND (*Copenhagen*)
PORTER (*St. Louis*), STGEORGE REID (*London*), SAJOURS (*Paris*),
SENDZIAK (*Warsaw*), SOTA (*Seville*), STCLAIR THOMSON (*London*),
WAGGETT (*London*), AND ZIEM (*Dantzic*).

INDEX TO VOL. X., 1896.

A.

Accessory cavities of Nose (*vide* Nose)
 Acromegaly 142
 Actinomycosis 343
 Adenoids (*vide* Naso-pharynx)
 Air passages, foreign bodies in 87
 „ urticaria œdematosa in 269
 Air and food passages, foreign bodies in 178, 310
 Anæsthesia produced by bromide of ethyl 74
 Anæsthesia produced by guaiacol 353
 Aneurism of ascending pharyngeal artery 318
 Angina (*vide* Tonsil)
 „ Ludovici 84, 341
 Aorta perforated by malignant œsophageal growth 349
 Aphonia (*vide* Larynx)
 Argyria 211
 Association Meetings—
 American Medical Association 247
 Austrian Otological Society 150, 189, 322
 Belgian Otologists and Laryngologists 45, 241
 British Laryngological, Rhinological, and Otological Association 106, 297
 British Medical Association 148, 183, 257, 334
 Dutch Laryngological, Rhinological, and Otological Society 198, 330
 French Society of Otology and Laryngology 65
 German Otological Society 263
 Glasgow Medical Chirurgical Society 255
 Hamburger Aerztlicher Verein 246
 Hungarian Otological and Laryngological Society 187
 Laryngological Society of London 29, 51, 131, 174, 235, 310
 Manchester Medical Association 182
 Medical Society of Geneva 256
 New York Academy of Medicine 59, 141, 318
 Oxford Medical Association 245
 Pathological Society of London 180
 Pathological Society of Manchester 245

Association Meetings (*continued*)—

 Pathological Society of Toronto 252
 Royal Academy of Medicine in Ireland 182
 Société de Laryngologie, d'Otologie, et de Rhinologie de Paris 253
 Spanish Congress of Oto-Rhino-Laryngology 204
 Third International Congress of Dermatology 358
 Twelfth International Congress of Medicine in Moscow 357
 Vaudoise Society of Medicine 246
 Vienna Laryngological Society 37, 43, 254, 325
 Wiener Medicinische Club 245

B.

Bibliography 94, 224, 289
 Bromide of ethyl 74
 Bulbar paralysis 131, 256

C.

Cancer, objects and limits of operation for 273
 Cancer (*see* Larynx, Ear, etc.)
 Clinics for Laryngology and Otology in England and Scotland 233
 Cocaine, dangers of 208
 „ tabloids 49, 219
 Cretinism (*vide* Thyroid)

D.

Deaf mutes, labyrinth in 92
 „ their sensitiveness and legal status 24
 Deaf-mutism, due to otitis interna 218
 „ functional 163
 Deafness, due to fracture of skull 163
 „ following mumps 278
 „ hysterical and functional 162, 163, 216
 „ labyrinthine, inflation in 282
 „ total, of sudden onset 279

Deafness, total, with bilateral facial paralysis 255
 „ „ result of inherited syphilis 356
 Diphtheria—
 accessory cavities of nose in 155
 antitoxin in 76, 84, 154, 183, 205, 206, 207, 245, 265, 266, 337, 338, 339, 340
 aprosia in (*vide* Tonsil)
 as a mixed infection in typhoid fever 338
 bacteriology, etiology, etc. 76, 77, 154, 181, 183, 186, 205, 206, 207, 245, 265
 feeding in diphtheritic paralysis 206
 followed by septicæmia; treatment by streptococcus serum 338
 hemiplegia following 339
 intubation for 76, 154, 206, 339
 leucocytosis 207
 nasal 242
 post-scarlatinal 265
 septicæmia following prophylactic use of serum 338

E.

Ear—

 ampullary apparatus, and the oculomotor centres 278
 amygdale aurium 325
 angioma 256
 „ cavernous 20
 asepsis and antisepsis 217
 attic disease, treatment of 161, 259, 297
 aural pyæmia 162, 195
 „ „ ligature of jugular for 280
 auricle: coloboma of 322
 „ gouty tophi 306
 „ new growth 151, 191
 auditory fields, exceptional 332
 bilateral malformation 192
 bromide of ethyl in oto-rhinology 74
 carcinoma 194
 cerebral abscess 92, 279
 cholesteatoma 66, 192, 193
 clinics for, in England and Scotland 233
 cochlear apoplexy 113
 deafness, absolute, of sudden onset 279
 „ absolute, by bilateral facial paralysis 255
 deafness, following mumps 278, 356
 „ hysterical and functional 162, 163, 216
 electricity in ear treatment 66, 162
 equilibrium, disturbances of 355
 Eustachian tube, distance of, from anterior nasal orifice 253

Ear (*continued*)—

 exaggerated auricular synergy 66
 facial paralysis of otitic origin 279, 324
 form of cranium in relation to ear operations 279
 fracture of skull causing deafness 163
 gangrene of ear 278
 hearing power in schools 74
 hearing power necessary for telephonists 331
 intracranial abscess, treatment of 282 (*see also* I)
 iodoform gauze plugs 68
 lateralization in bone conduction 264
 labyrinthine deafness and inflation 282
 labyrinthine disease, rotary sensations in 257, 332
 labyrinth in deaf-mutes 92
 „ necrosis of 161, 324
 lateral sinus, exploration of 162
 „ „ thrombosis of (*see* Intracranial)
 mastoid, auscultation of 17
 „ Bezold's mastoiditis 353
 „ cholesteatoma in 192
 „ in a case of carcinoma 194
 „ eburnation of, in exostosis of meatus 151, 244
 „ intra-mastoiditis with pus burrowing into pharynx 90
 „ mastoiditis, a complication of diabetes mellitus 355
 „ mastoiditis, a complication of otitis 218, 282
 „ mastoiditis, primary, with secondary involvement of tympanum 217
 „ mastoiditis, with septic thrombosis of lateral sinus 217, 218
 „ operation on—
 accidental opening of lateral sinus 278
 „ late stitch in 196
 „ for otitis media 71, 90, 91, 189, 280, 352
 „ for otitis media with cerebral abscess, thrombosis, etc. 69, 91, 92, 162, 163, 188, 281, 282
 „ by special methods (Panse, Körner, etc.) 71, 153, 193, 201, 202, 280, 282
 „ how to avoid facial nerve 351
 meatus, acute hematoma of 277
 „ exostosis 150, 151, 190, 244
 „ cinder in 215
 „ cockchafer in 90
 „ foreign bodies (lecture on) 282
 „ hairpin in 215
 „ hayseed in 305

Ear (*continued*)—

- meatus, hyperostosis of 307
- „ larvæ in 217, 351
- „ occlusion of 352
- „ revolver shot in 324
- „ small shot in 215
- membrane, vibrating cicatrix in 90
- „ ruptured by indirect violence 254
- „ ruptured by hanging 70
- Ménière's disease 153, 193, 216
- „ symptoms cured by pilocarpin 281
- „ symptoms following cholesteatoma 66
- meningitis, focal symptoms without abscess 323
- nose and ear treated by oxygen 108
- objective noise 354
- otitis media, case of 189
- „ „ complications of 91
- „ „ complicated by mastoiditis 218, 282
- „ „ after influenza 217, 280
- „ „ double, with cerebral complications 69
- „ „ followed by mania 252
- „ „ excision of membrane for 282
- „ „ excision of ossicles and membrane 280
- „ „ followed by septicæmia 340
- „ „ in postero-superior quadrant 67
- „ „ special form of 263
- „ „ with cerebellar abscess (*vide* Intracranial)
- „ „ with subdural abscess (*vide* Intracranial)
- „ „ without perforation 195
- „ „ with suppurating mastoiditis 218
- otorrhagia in typhoid fever 74
- otorrhœa and its complications 90
- „ following scarlet fever 92
- „ dressings for 351
- „ Stacke's operation for 280
- paracusis 26
- pathological specimens 197, 216
- periotic phlegmonous œdema 67
- polypi and granulations, treatment of 354, 356
- polypus 116
- prophylaxis 278
- skin-grafting (*see* operations on mastoid, *supra*)
- statistics 163
- subjective noises 65
- temporal bone, abnormality of 197
- „ „ caries of 242
- „ „ dehiscences in 263

Ear (*continued*)—

- temporal bone, epithelioma of 242
- „ „ fissure in tegmen tympani 197
- „ „ inflammation of, influenced by development 75, 281
- temporo-sphenoid abscess without focal symptoms 323
- test for sound conduction 195
- tinnitus 162, 216, 217
- Toynbee's otoscope 330
- tumours 92
- tympa-num, foreign body in 275
- „ operations on 201, 202
- „ (*see also* Mastoid, operations on)
- „ removal of membrane and ossicles 90, 280
- „ malleus, extraction of, influence on other ear 150
- „ malleus, fracture of 216
- „ „ surgery of 191
- „ stapes, ankylosis of 351
- „ „ disorganization of 283

F.

- Facial paralysis 255, 279, 324
- Fevers, bacteriology of throat in 77

G.

- Gargles, uselessness of 106
- Glandular gastritis, due to diseases of mouth, ear, and throat 158
- Gum (*vide* Mouth)
- Guaiacol as an anæsthetic 353

I

- Intracranial complications in ear disease—
- abscess 92, 182, 188, 279, 282, 323, 340, 350
- sinus thrombosis 91, 92, 182, 217, 218, 281
- meningitis 69, 242, 324
- inflammation of temporal bone 91
- exploratory opening made 162, 278
- epithelioma of temporal bone 242
- Instruments—
- acoumeter 70
- aural and nasal speculum 83
- electrical plane and saw 247
- ethmoid clippers 247
- for dilating larynx 212
- for intratracheal injections 318
- galvano-cautery handle 255, 329

Instruments (*continued*)—

- galvano-cautery handle with rheostat 204
- guarded chromic acid applicator 210
- guide for mastoid operation 253
- handle for curettes for adenoids 83
- insufflator 219
- magnifying glass to fix on finger 69
- nasal hammer 157
- nasal saw 141
- polypus forceps 83
- retr-nasal canula 83
- rubber bib 59
- scissors for inferior turbinated 43
- snare for anterior ends of turbinateds 255
- tongue depressor 83, 269
- tonsillar knife 141

L.

Larynx—

- aphonia (hysterical) 87
- aphonia in relation to varix of tongue 275
- carcinoma of 140, 239
- chicken-pox of 212
- clinics for, in England and Scotland 233
- crico-arytenoid articulation — rheumatic inflammation of 347
- cyst 86
- „ of glosso-epiglottic fold 235
- doubtful cases 31, 36, 53, 134, 140, 236
- epithelioma 133, 274
- „ of epiglottis 273
- „ in young subject 275
- fish bone in 213, 330
- hæmatoma of pyriform sinus 255
- herpes of 87
- ictus 85, 212
- inferior laryngeal nerves, physiology of 347
- laryngectomy for epithelioma 133
- „ for myxo-chondroma 133
- „ for sarcoma, 86
- laryngitis sicca 159
- lead poisoning (laryngeal paralysis) 212
- myxo-chondroma of 133
- myxoma of 29, 237, 238
- neurosis of 160
- „ following typhoid fever 30
- œdema 86
- pachydermia 33, 140, 159
- papilloma diffuse 32, 159
- „ cured by absolute alcohol 146
- „ subglottic 346
- paralysis 29
- „ bulbar 131, 256
- „ due to aortic aneurism 211

Larynx (*continued*)—

- paralysis due to mediastinal tumour 276
- „ following influenza 211
- „ syphilitic 273
- „ with crises 137
- palate and larynx, lupus of 240
- pharynx and larynx, lupus of 34
- polypi, inflammatory origin of 253
- Röntgen rays 231, 317
- sarcoma 86, 198
- spasm of glottis 183
- stenosis 55, 85
- suicide (curious case of) 159
- syphilis 212
- thyrotomy, description of, with cases 62, 276, 334
- „ for fibrous polypus 212
- „ for carcinoma 239
- tremor of intra-laryngeal muscles 160
- tuberculosis 134, 275
- „ creosote injections for 59, 60
- „ dysphagia, treatment of 348
- „ iodoform in 134
- „ and lupus, treatment of 334
- „ parachloro-phenol in 88
- „ phenol in sulphuricinate of soda in 48
- „ surgical treatment of 160, 199, 203
- „ and of trachea and pharynx 53
- tumour of 61, 198
- in typhoid fever 174
- typhoid ulcer 32
- ventricle, functions of 172
- vocal cord, growth on 52
- „ „ warty growth on 35, 138
- „ „ inspiratory spasm 58
- „ „ traumatic division of 346
- „ „ vibration of 261
- vocal defects in teachers 167
- voice (*vide V.*)

M.

Mediastinal tumour 277 (*vide also*

Larynx)

Mouth—

- ductus Rivini, inflammation of 210
- gums, tumour of 268
- lips, affections of 210
- parotid, inflammation of (secondary) 156, 342
- „ mumps (*vide Deafness*)
- „ tumours of, in faucial region 268
- salivary calculus 37

Mouth (*continued*)—
 xerostoma 341, 342
 Myxoedema (*vide* Thyroid)

N.

Naso-pharynx—
 adenoids, aprosexia, convulsions, etc.,
 due to 267
 „ cause of otitis 157
 „ headache from 83
 „ recurrence of 156
 „ treatment of 78, 79, 80,
 209, 344
 catarrh of 270
 fibro-angioma 79
 fibro-mucous polypi 275
 growth—operation for 79
 in relation to voice 271
 myxo-fibroma 82
 and nose, polypi of 52
 phlegmon 43, 326
 polypus 238, 329
 tumour 326, 327
 Neck—
 adenitis 85
 cervical fistula 89, 238
 branchial fistula 277
 etiology and treatment of chronic en-
 largements of lymphatic glands 277
 surgery of glands in 343
 syphiloma of neck and throat 46
 Negroes: throat, nose, and ear diseases
 in 345
 Nose—
 accessory cavities—
 combined affections of sinuses
 40, 246, 249, 254, 328
 „ complications of suppuration
 157
 „ diagnosis and treatment 37,
 271, 333, 356
 „ in diphtheria, measles, and
 scarlet fever 155
 „ intracranial complication
 246
 „ antrum of Highmore, empy-
 ema 32, 38, 82, 155,
 209, 248
 „ „ foreign bodies in 79
 „ „ serous inflammation
 157
 „ ethmoid cells, empyema 37,
 40
 „ „ anatomy and pathology
 of 271
 „ frontal sinus, empyema 39
 43, 80, 144, 255, 256, 271,
 272, 309, 328
 „ sphenoid sinus, empyema 40,
 44

Nose (*continued*)—
 affections of, as factors in chronic
 gastritis 346
 angioma 235
 angio-neurotic œdema of nose, uvula,
 and pharynx 266
 chancre 80, 270
 coryza with erythema of upper lip 82
 diphtheria of 242
 diseases of, in relation to eye diseases
 81, 208
 diseases of, in relation to trigeminal
 neuralgias 80, 156
 distance between anterior orifice and
 mouth of Eustachian tube 253
 doubtful case 146
 ears and nose treated by oxygen 108
 ethmoiditis 208
 fibroma 156
 „ congenital 330
 foreign bodies in, button 345
 „ „ cherry stone 345
 „ „ larvæ 236
 „ „ plug 187
 „ „ rhinolith 80, 81,
 116, 252, 269, 272,
 330
 „ „ tooth growing in
 344, 345
 „ „ tooth, superfluous 80
 hay fever 208, 209
 hydrops of 156
 kakosmia subjectiva 210
 micro-organisms in 157, 208
 nervous apparatus of olfaction 81
 new rhinology 357
 obstruction, case of 34
 „ effects of, etc. 117
 „ effects on growing skull
 80, 209
 „ effect on upper jaw 330
 „ in children 269
 ozæna, bacteriology 344
 „ curettement 209
 „ etiology and antidiphtheritic
 serum treatment 343
 „ ichthyol in 155
 „ serum therapy 344
 „ treatment of 46
 papilloma 51, 272
 parosmia 83
 and pharynx in relation to myopia
 155
 and pharynx, etc., syphilis of 146
 polypus 134, 255
 reflexes from 155, 156, 208
 rhinitis, acute primary infective
 (staphylococcal) 270
 „ purulenta in children 270
 rhinoplasty 81, 208
 rhino-scleroma 82, 344
 sarcoma 211, 245, 309

Nose (*continued*)—

- separation of cartilages 345
- septum, abscess 147
- „ bleeding tumours 103
- „ deflections 34, 82
- „ electrolysis 45, 207
- „ fibroma 56, 139
- „ papilloma 43
- „ projections, operations for 208
- „ tubercle 57
- „ ulceration 57
- „ ulceration after operation 250
- sequestrum 81
- statistics of diseases of 255
- synechia (operation for) 273
- syphilis, malignant 255
- „ tertiary 146, 254
- tuberculosis 57, 240, 309, 310
- turbinal bulla 243
- „ hypertrophy 268
- turbidotomy 43, 159, 325
- „ regeneration of tissue after 31, 134
- unitia voras 81
- vestibule, sarcoma of 309

O.

Obituary : Fauvel 218

Œsophagus—

- foreign bodies in (*vide* Air and Food Passages)
- malignant disease of 35, 181
- „ stricture, perforation of aorta 349
- œsophagotomy 211

Oxygen (*vide* Ear and Nose)

P.

Palate—

- benign tumours of arch of 342
- „ cleft 145
- growth on 238, 240
- lupus of and of larynx, etc. 240
- sarcoma 210
- spasm of 133

Pharynx—

- actinomycosis 343
- aneurism of ascending pharyngeal artery 318
- angioma 268
- angio-neurotic œdema 266
- congenital perforation of pillars 84, 210
- epithelioma of dog's pharynx 309
- foreign body 58
- gargles, uselessness of 106
- hæmorrhage from 142
- lupus of 275

Pharynx (*continued*)—

- lupus of, and of larynx 34, 240
- pharyngotomy 211
- spasm of and of palate 133
- tuberculosis of 342
- „ „ and of tongue 52
- tumour of 240
- ulcerative syphilide 211

Q.

Quinsy (*see* Tonsil)

R.

Reports on drugs, etc.

- adefor lanæ 94
- antidiphtheritic serum treatment charts 94
- Bullock's cocaine lozenges 49
- Burroughs, Wellcome & Co.'s cocaine tablets 219
- citrate and bitartrate of lithia 358
- compound caffeine tablets 288, 358
- Lewis's nursing chart 94
- litmus pencil 358
- menthol snuff 49
- perfected Wyeth beef juice 94
- soloids of carbolic acid 358
- tablets of oxalate of cerium 358

Retrospect of year 1895, 1, 7

Reviews of books—

- Blakiston & Co. : Physicians' Visiting List 93
- Bresgen : Krankheiten und Behandlungslehre der Nasen-Mund und Rachenhöhle, etc., 223
- Burroughs, Wellcome & Co. : A B C Medical Diary 93
- Burroughs, Wellcome & Co. : Chemists' Vest Pocket Diary 93
- Cozzolino : Otology, etc., in German and Austrian Universities 220
- Ewald : Die Erkrankungen der Schilddrüse, Myxœdem, and Cretinismus 221
- Garnault : Cours Théorique et Pratique de Physiologie, d'Hygiène, et de Thérapeutique de la Voix Parlée et Chantée 283
- Garnault : Précis des Maladies de l'Oreille 47
- Gerber : Die Syphilis der Nase und des Halses 164
- Gould : American Year Book of Medicine and Surgery 165
- Grünwald : Die Lehre von den Nasenerkrankungen 284
- Jones : Medical Electricity 165

Reviews of books (*continued*)—

- Kirstein : Die Autoskopie des Kehlkopfes und der Luftröhre ohne Spiegel 222
 Noble Smith : Clinical Sketches 93
 Pedley : Diseases of Children's Teeth 48
 Rouault : Le Phénol Sulforiciné dans la Tuberculose Laryngée 48
 Schmidt : Anatomy of the Human Head and Neck 223
 Stoerk : Die Erkrankungen der Nase, des Rachens, und des Kehlkopfes 221
 Treupel : Die Bewegungsstörungen im Kehlkopf bei Hysterischen 286
 Röntgen rays 231

S.

Salivary (*vide* Mouth)

- Serum antidiphtheritic (*vide* Diphtheria)
 „ antistreptococcal 241 338 (*see also* Tonsil Angina)
 „ for ozæna 344
 syphilitic infection of and by medical practitioners 342

T.

Temporal bone (*vide* Ear)

Throat—

- bacteriology of, in fevers 77
 cut throat 252
 neck and throat, syphiloma of 49
 sore throat, etc. (*see* Pharynx, Tonsils, etc.)

Thyroid gland—

- accessory 180
 acute bronchocele after influenza 214, 215
 adenoma 88
 „ exogenous 349
 administration of, relation of diet to 160
 cancer of 88
 cretinism, improved by thyroid feeding 245
 cretinism, sporadic, thyroid treatment 276, 349
 cyst of 88, 161, 349
 cysts and adenomata 348
 diseases of 56
 enlargement of 36
 goitre, among American Indians 89
 „ cases of, in one family 145
 „ etiology of 214
 „ recurrence 180
 „ sporadic 89

Thyroid gland (*continued*)—

- goitre, treatment by thyroid gland 89, 213
 goitre, exophthalmic—
 „ „ cases of 88
 „ „ treatment, thymus 213, 349
 „ „ treatment, thyroid 215
 „ „ followed by myxœdema 215
 „ „ tremor and delirium cordis in 246
 myxœdema treated by thyroid feeding 89, 160, 182, 213, 214, 245
 „ „ and tetany, relation to lactation 161
 physiology of 160, 213, 214, 215
 sarcoma of 52
 surgery of 148, 180
 thyro-iodine, treatment by 215

Tongue—

- angioma cavernous 84
 as an aid to differential diagnosis of angina and diphtheria 84
 cancer 257
 carcinoma 266
 cyst of glosso-epiglottic fold 235
 fibro-sarcoma 211
 foreign body in 268
 lupus of 269
 lymphoid hypertrophy of the base in singers 84
 unusual mobility of 248
 varix 267
 „ in relation to aphonia 275

Tonsils—

- a factor in rheumatic fever 343
 angina and diphtheria 154, 205
 „ due to carious teeth 157
 „ due to streptococci, treated with antistreptococcal serum 241
 „ infectiousness of 78, 85
 „ in influenza 84, 85
 aprosexia, convulsions, etc., due to tonsillar disease 267
 carcinoma 136
 epithelioma 136
 hard chancre 241
 lipoma 211
 operation for enlarged tonsil 210
 quinsy, abortive treatment of 268
 septic tonsillitis as an acute specific disease 83
 sore throat in influenza 84
 statistics of sore throat 267
 tertiary syphilitic follicular inflammation 341
 tonsillitis with hæmorrhage 182
 tuberculosis 211
 tumours of 340

Tonsils (*continued*)—

- lingual, hæmorrhagic myxoma of 31
- „ hypertrophy and varix 84,
267, 275
- „ acute inflammation of 341

Trachea—

- condyloma 86
- intratracheal injections in diseases of
the respiratory tract 319
- syphilitic ulceration of 34
- tracheotomy and its after-treatment
346
- tracheotomy for dyspnoea due to gout
241
- tubercular ulceration of trachea,
larynx, and pharynx 53

U.

- Urticaria œdematosa affecting the air
passages 269

V.

Voice—

- aphonia (hysterical) 87
- „ in relation to lingual varix
275
- chronic hoarseness accompanying
chronic rhinitis and pharyngitis 239
- defects of, in school teachers 167
- influence of naso-pharynx on 271

NAMES OF AUTHORS.

- | | | |
|--|---|---|
| <p> Abel 205
 Ackland 350
 Adolph 205
 Akerblom 210
 Alderton 90
 Allard 160
 Alt 195
 Amyot 252
 Anderson 252, 266
 Angelesco 273
 Angieras 65
 Anrooy 203
 Armitage 90
 Arslan 277, 340
 Atkinson 76
 Augerer 213

 Baginsky 185
 Ball 29, 52
 Ballance 350
 Ballenger 207, 266
 Baber 51, 313
 Barclay 215
 Barclay-Ness 276
 Bark 269
 Barker 149, 180, 181
 Barr 78, 216
 Bartholow 88
 Barth 264
 Barton 319
 Batten 155
 Baumann 213
 Bayer 241
 Beale 36, 52, 235, 236,
 239, 314
 Bean 90
 Beausoleil 341
 Bédos 85
 Belfanti 343
 Bennett 52
 Berens 155
 Berry 149, 348
 Bevan 351
 Bezold 351
 Bienenstock 255
 Biggs 76, 186, 187
 Bing 189, 192
 Bishop 278
 Bloom 213 </p> | <p> Boethger 246
 Boltz 210
 Bond 133, 236, 237
 Bonnier 278
 Booth 212
 Boulay 269
 Bowlby 30, 31, 79
 Braislin 351
 Boyd 79
 Bresgen 223
 Brewer 142
 Brimon 270
 Broca 79
 Brondgeest 334
 Bronner 31, 90, 134, 155,
 259, 297, 305, 315
 Brown 88
 Browne, L. 106, 185, 267
 Brunschwig 79
 Buckingham 154
 Buller 90
 Bunch 273
 Burger 155
 Burgess 182
 Burnell 90
 Buschan 160
 Butlin 148

 Campbell 128
 Capart 46, 244
 Carslaw 156
 Cassell 158
 Cathcart 150
 Chappell 60, 142, 341
 Chapuis 274
 Charsley 316
 Cheval 45, 242, 244
 Cheyne 273
 Chiari 38, 43, 255, 325,
 329
 Chiucini 278
 Clemens 161
 Clubbe 337
 Cluchen 150
 Coakley 59
 Coffin 141, 248, 318
 Collier 80, 117, 156
 Connal 161
 Corradi 85 </p> | <p> Couetoux 351
 Coulter 270
 Courtade 253, 278, 352
 Cozzolino 220
 Cripps 134

 Dalby So, 162
 D'Aguanno 26
 Dasgue 278
 D'Aubnay So
 Daunic 74
 Davis 212
 Deanesley 162
 Deknatel 216
 Delavan 145
 Della Vedova 343
 Delstanche 243
 Deutschmann 246
 Didsbury 343
 Dixey 245
 Domenreiz 160
 Douglas 141, 250,
 252
 Downie 267, 279
 Drysdale 174
 Dukes 267

 Ebstein 255
 Edes 213
 Eeman 241, 242
 Embden 246
 Engelmann 265
 Escat 67
 Ewald 221

 Fage 344
 Farber 208
 Fauvel 218
 Ficano 341
 Fink 156
 Finlayson 276
 Fougeray 68, 270
 Fournier 342
 Fox 268
 Franke 246
 Freudenthal 344
 Fritts 216
 Frothingham 61
 Fullerton 210 </p> |
|--|---|---|

- Garnault 47, 279, 283
 Gaston 206
 Gayet 88
 Gellé 67
 Gerber 164
 Geronzi 279
 Givel 268
 Glover 214
 Gomez 210
 Gompertz 191, 193
 Goodall 184, 187, 265
 Gouguenheim 342
 Gould 164
 Gradenigo 81, 279, 344
 Graham 344
 Grant 7, 37, 140, 238,
 239, 300, 315, 350
 Green 162
 Griffin 80
 Gruber 153, 194, 196,
 197, 210, 322
 Grünwald 284
 Guément 280
 Guinard 81
 Guye 257, 232

 Habermann 159
 Hack 245
 Haegler 205
 Hajek 44
 Hall 186, 208
 Hallé 212
 Haltenkoff 256
 Hance 248
 Hardy 182
 Haring 245
 Harris 162, 248
 Hartman 263
 Hassell 80
 Hawthorne 156, 276
 Heath 280
 Hektorn 338
 Helot 70
 Hennebert 242
 Henry 76
 Hermann 208
 Herzfeld 208
 Hess 246
 Hewlett 157, 205
 Hill, W. 31, 134, 303,
 309, 314
 Hodgkinson 261, 172
 Holinger 217
 Holmes 89
 Hopkins 156
 Horne 177
 Hubbard 59, 147
 Hulén 84

 Jamieson 210
 Jessop 316
 Joachim 80

 Johnstone 185
 Jones, L. 162, 165
 Jones, M. 126, 305, 306
 Jormesco 81
 Jourdan 81
 Jouslain 74, 254

 Kanthack 32, 174, 177,
 181, 237, 311, 338
 Kassowitz 246
 Kaufmann 193
 Keegan 208
 Kelly 338
 Kendall 210
 Kidd 33, 34
 Kitfin 214
 Kirstein 222
 Klein 186, 187
 Knapp 91, 352
 Knight 156, 275
 Koerner 217
 Kortwright 338
 Krebs 158
 Kretschmann 263
 Kummer 257
 Kummell 246

 Lack 237, 312, 346
 Lacoarret 66, 346
 Lake 1, 280
 Langenbuch 280
 Lammors 70
 Lapalle 84
 Latter 348
 Launois 81
 Laurens 81, 86, 208, 268,
 353
 Laurent 244
 Law 34, 307
 Lawrence 52, 238, 311
 Lederman 157
 Lemairey 281
 Lemke 246
 Lemoine 205
 Leseur 208
 Levi 86
 Lichtenberg 188
 Lichtwitz 157, 268, 277,
 346
 Lindsay 277
 Litchfield 337
 Lloyd 149
 Loeb 208
 Louis 206
 Lubet-Barbon 75, 281
 Luc 71, 353
 Lucas 281

 Macintyre 4, 231
 Mackenzie 209
 Mackenzie, H. 86
 Mandelstamm 87

 Marchant 282
 Marfan 212
 Marie 89
 Martin 183, 206, 256
 Max 190
 McBride 236, 239, 275
 McKennan 268
 McKie 349
 Mendel 253
 Ménière 254
 Merklen 212
 Mermod 246
 Mial 141, 145, 247
 Middleton 255, 276
 Milligan 113, 116, 167,
 282
 Mixer 268
 Molinié 69, 74
 Moll 199, 202, 333
 Morgan 87
 Morris 89, 214
 Morrow 342
 Moullin 91
 Mounier 66
 Moure 20, 270, 282
 Muir 318
 Munson 89
 Murdock 339
 Murfan 212
 Murray 214
 Myles 144, 145, 247,
 250, 270, 271

 Nash 162
 Nes 154
 Newcomb 145
 Newman 134, 136
 Nicall 277
 Nichols 163
 Nolan 205, 339
 Noltermis 157
 Norme 246
 North 206

 Okunnief 17
 Onodi 211
 Oppenheimer 82
 Ortega 271
 Ottolenghi 24

 Panzer 43, 254, 328
 Parker 137
 Péan 82
 Peck 77
 Pedley 48
 Pegler 116, 238, 309
 Peltesohn 246
 Pender 209
 Permewan 271
 Pfeffermann-Bors 212
 Phillips 247
 Pinder 82

- Pitt 181
 Pitts 91
 Politzer 151, 153, 192,
 193, 197
 Pollak 325
 Poore 212
 Pope 206
 Price-Brown 209 250
 Pritchard 354

 Quaife 344
 Quinlan 145

 Randall 282
 Ranglaret 271
 Ranke 185
 Ransom 163
 Ravogli 211
 Ray 84
 Reinhardt 201
 Reintjes 198
 Renaud 345
 Rethi 160, 255
 Ricci 339
 Rice 250
 Richardson 82, 217
 Richey 217
 Riesman 342
 Ripault 84, 272, 342
 Ritter 157
 Roos 214
 Roschier 255
 Rosenberg 342
 Roth 43
 Rousseau 243, 244
 Royet 82
 Ruault 48
 Rudaux 82
 Rutten 46, 244

 Saint-Philippe 265
 Sanger 246
 Santi 53, 334
 Sanit 84
 Scatliff 303
 Schauz 206
 Scheff 327
 Scheibe 92, 218
 Scheier 160
 Schein 161
 Scheppergrell 345
 Scherk 215
 Schiffers 244
 Schleicher 204

 Schlesinger 207
 Schmidt 223
 Schnée 157
 Scholk 215
 Schramm 211
 Schultzer 160
 Schwager 354
 Secrétan 87
 Seifert 345
 Semon 29, 53, 131, 177,
 236, 237, 240
 Sendziak 103, 347
 Sequeira 154
 Sharman 316
 Sharp 318
 Shattock 177, 349
 Shield 282
 Shurly 339
 Shuttleworth 77
 Sikkell 330
 Smerton 215
 Smith 206, 215
 Somers 345
 Spencer 55, 237, 239
 Spengler 88
 Spicer, S. 35, 138, 240,
 310
 Spire 269
 Spivak 346
 Stabb 36, 56, 240
 Stephens 181, 338
 Steward 211
 Stewart 35, 56, 240,
 316
 Stoerk 221
 Stoker 108, 317
 Stokes 161, 207
 Stoerk 329
 Straight 83, 213
 Strangways 209
 Sudeck 207
 Sutton 89
 Symes 77
 Symonds 2, 148, 178, 236

 Taylor 349
 Terry 84
 Texier 74
 Thomas 149, 339, 340
 Thompson 86, 235, 238
 Thomson 139, 157
 Thorburn 252
 Thost 209

 Thresh 78
 Tidey 83
 Tilley 83, 140, 275, 239,
 240
 Tocheport 265
 Todd 218
 Trafford 163
 Treitel 92
 Treupel 286
 Treysel 215
 Trifiletti 347
 Troquart 85
 Turk 157
 Turner 92

 Underhill 187
 Urbantschitsch 150, 193,
 194, 323, 324
 Urquhart 355

 Vacher 69, 83
 Vallas 211
 Vansant 273
 Vergely 85
 Vinke 349
 Von Stein 355

 Wade 343
 Waggett 57, 302, 316
 Wagner 62, 276
 Walker 218
 Watkin-Browne 215
 Weil 37, 43, 326
 White 266
 Wieland 207
 Wilkin 356
 Willetts 282
 Williams 175, 178, 349
 Willis 58
 Winkler 157
 Woakes 269
 Wolf 155
 Wood 340
 Woods 182
 Woodbury 269
 Woodhead 185

 Young 210

 Zarniko 210
 Zwaardemaker 204, 330,
 331, 332
 Zwilling 187

THE
JOURNAL OF LARYNGOLOGY,
RHINOLOGY, AND OTOTOLOGY.

VOL. X.

JANUARY, 1896.

No. I.

Original Articles are accepted by the Editors of this Journal on the condition that they have not previously been published elsewhere.

Twenty-five reprints are allowed each author. If more are required it is requested that this be stated when the article is first forwarded to this Journal. Such extra reprints will be charged to the author.

The Editors are not responsible for opinions expressed in original Articles or Abstracts in this Journal.

Editorial Communications are to be addressed to "Editors of JOURNAL OF LARYNGOLOGY, care of Rebman Publishing Company, Limited, 11, Adam Street, Strand, London, W.C."

NOTE.

IT is with great regret that the editors of the JOURNAL announce the retirement of Dr. Milligan after so short a time, and they are equally convinced that their regrets are shared by the subscribers to the JOURNAL. At the same time they wish to tender their hearty thanks to Dr. Major for his able assistance as collaborator, and to express with sincerity their sorrow that his health precludes his remaining with them longer.

RETROSPECT OF THE YEAR 1895.

NOSE AND NASO-PHARYNX.

Although, during the past year, there has been, if possible, more work than usual done in this section, yet, maybe, it is less absolutely original than usual, the larger discussions being more an elaboration of the methods of treatment already in vogue, with more precise ideas as to their uses and relative applicability.

Atrophic Rhinitis.—Hajek ("Sixty-sixth Cong. Berlin Nat. and Phys.") distinguishes between atrophy and pseudo-atrophy of nasal mucosa; in the latter only is there hypertrophy of the middle turbinated and middle meatus, and in typical atrophy disease of the accessory cavities is rare. Sanger ("Therap. Mouth," Oct., 1894) believes broadness of the nose to be the cause of ozena, and recommends artificial narrowing of the meatus by vulcanite diaphragms. Cheval ("Journ. Laryng.," Nov., 1895) advocates cupric electrolysis in this disease, and J. P. Clark ("Boston

M. and S. Journ.," Oct. 3, 1895) points out that atrophic rhinitis is more common in phthisical than in non-phthisical people.

Purulent Rhinitis in infants is said by Dedieu ("Thesis de Paris," 1895) to be due to the gonococcus. Tilley ("Lancet," Oct. 12, 1895) reports three cases of parosmia, which he treated with local applications of strychnine, curing one and relieving another. C. Jones read an extremely instructive paper on *Turbinotomy in Relation to Deafness* at the British Medical Association meeting in August, believing the hypertrophic mass kept up Eustachian catarrh, by acting as a foreign body. Coakley describes a case of *Syphilitic (inherited) Osteomata of the Turbinates*, which were improved by anti-syphilitic treatment.

Collier ("Med. Press and Cir.," Nov. 20, 1895) contributes a most valuable paper on *Chronic Nasal Obstruction*, in which he demonstrates the suction action in a closed nostril by the act of inspiration through the patent one. When a concavity is found in the septum it is pathognomonic of nasal obstruction at night, even if there is none present during the day.

Wolfenden showed two interesting cases of *Malformation of the Pharynx* ("B. L. A.," June, 1895).

Thomson and Hewlett, in a paper ("Med. Chir. Soc.," May 28, 1895) on *Micro-Organisms*, say the vestibule contains micro-organisms, but they are exceptional elsewhere.

Scheff ("Berlin Nat. and Phys.") thinks he has proved the middle meatus is that used for respiration.

Septum.—Romper ("Monats. Ohrenheilk.," Nov. 9, 1895) reports a case of *Lipoma of Septum*.

Bresgen recommends electrolysis in deflections of the septum and thickenings of the nasal mucosa in delicate people when radical measures are contra-indicated.

Mayer ("N. Y. Acad. Med.," Oct., 1895) reports a case of *Asthma, with maniacal attacks*, cured by removal of a septal spur.

Freudenthal reports a case of *Hæmorrhage from an Angioma of Septum* ("N. Y. Acad. Med.," Feb., 1895).

Casselberry ("Amer. Laryng. Assoc.," June, 1895) discusses very fully the indications for the use of *Electrolysis for the reduction of Nasal Spurs*. He obtains good results even in bony spurs.

With regard to the accessory sinuses there has been little original work done, though, as previously stated, the indication for operation and applicability of recognized methods of treatment have been brought to a focus. The year has seen many fruitful discussions at societies and congresses, notably in America, France, Germany, and England. At the London Laryngological Society the discussion was kept entirely to the treatment of empyema of the antrum of Highmore, and was not productive of any markedly original matter, the various speakers adhering more or less to their previously expressed and well-known opinions.

Frontal Sinus.—Luc (558), following Collier closely, has obtained almost equally brilliant results, the chief difference between the two operations being in the incision, Luc's being L-shaped. Moure (565) lays

great stress on latent empyema being more frequent than is generally supposed, and advocates the removal of the anterior end of the middle turbinate in order to permit of free drainage from the sinus. Kahn (781) showed a specimen of necrosis of the frontal sinus. Schech (781) considers pain on pressure of the lower orbital wall is a valuable symptom in latent frontal empyemata.

Ethmoidal Sinuses.—Grünwald still supports the views originally advanced by Woakes, which he considers he has demonstrated conclusively. All authorities are agreed that in disease of this sinus removal of the anterior extremity of the middle turbinate is necessary as a preliminary measure. Gleitsmann has invented a most useful instrument by which this may be most easily accomplished, one which is superior to most of, if not all, its predecessors; Bosworth ("Journ. Laryng.," 471) has reported a case in which death occurred shortly after the ethmoidal cells had been attacked by means of the burr, and it seems not unreasonable to suppose that the sequel in this case was not entirely uninfluenced by the treatment. Bryson Delavan, Schaefer, and others use scoops or curettes to break down the partitions between the cells and to remove disease. All these authors, as well as others not quoted, agree that the important point is that the dependent opening shall be of sufficient magnitude, forceps being used for this purpose. Bosworth recommends that after his operation the patient be not allowed to blow the nose for some time afterwards. Macdonald advocates the following ingenious method of irrigating these cavities. The patient lies down on his back in the head-down position; the irrigating fluid is then poured into the nostrils, where it is allowed to remain for a short time.

Sphenoidal Sinus.—Krause (643) maintains that it is easy, or at all events not difficult, in a large proportion of cases, to introduce a probe into its cavity. Hajek says ("Wein. Laryng. Ges.," June, 1895) that the presence of pus in the fissura olfactoria is pathognomonic of suppuration in this sinus if it is not caused by a local process.

The antrum of Highmore has received an enormous amount of attention, there being, perhaps, a greater tendency to conservative surgery here than elsewhere amongst the accessory sinuses. Semon ("Lond. Laryng. Soc."), Ziem ("Journ. Laryng.," Oct., Nov., Dec., 1895), and, perhaps, Mackenzie ("Journ. Laryng.," 629) spoke most loudly against too radical measures.

Antrum of Highmore.—J. W. Mackenzie considers Freeman's operation the best intra-nasal method of dealing with suppurative disease of this cavity, although for various reasons he does not accord it the first place, chiefly as it is impossible for the patient to carry out his own treatment. It is often painful, and by no means universally applicable. He is in favour of the alveolar operation as a rule, believing the chief cause of the trouble arises in connection with the teeth.

W. H. Daly enters the antrum above the first molar in chronic cases. He also recommends as an antiseptic the following mixture:—Oil of eucalyptus, one part, and nine parts of Friar's balsam. He has often seen fairly acute inflammation after these operations. De Roaldes ("Brit. Laryng. Assoc.," July, 1895) has made some very interesting observations

with regard to the rarity of inflammatory affections of this cavity in the negro race compared with that of the white races. Stoker ("Brit. Laryng. Assoc.," July, 1895) expects to obtain brilliant, or, at all events remarkable results by the oxygen treatment, basing his deductions on investigations in open wounds, in which the presence of micro-organisms, rather contrary to the general idea, act beneficially. He has at present, however, recorded no cases. Ziem ("Journ. Laryng.," Oct., Nov., Dec., 1895), in a most admirable monograph, reviews the history of the various operations, commencing in the last century: next deals with the various accidents liable to be met with, dealing especially with the dental burr. The objections against Cooper's method are: a sound tooth is often sacrificed; the space is not sufficient; re-infection may take place from the mouth. He deals with these objections *seriatim*, showing how even local anæsthesia is not necessary, and that, by means of a force-pump, washing out can be accomplished through the smallest opening. He has even in one case penetrated to the depth of forty-five millimètres without striking the cavity. One should always work slowly and carefully. Another thing he is very emphatic about is that by far the best irrigating fluids for this purpose are boiled water, Tavel's solution, or a weak solution of Kreuznack salt—that is to say, he is in accord with Krieg that chemistry will not assist us here. Most unfortunately, he gives no detailed statistics of his cases. He also points out that fluid is able to escape quite freely from the antrum if the normal opening is patent.

R. Lake.

PHARYNX.

In our last retrospect we pointed out that each year's review of the work done was a matter of increasing difficulty, and the same might be said again. Every part of the upper respiratory tract has been more and more investigated, details and elaborations are constantly being recorded, and a retrospect covering the whole ground would occupy more space than we have at our disposal. The importance of etiology is being more than ever recognized, and it is extremely interesting to note the change which has come over our views on the subject from the literature of the past year. The most important work of all, of course, has been shown in the influence of bacteriological research, which in this department, as in many other branches of surgery, has practically revolutionized our ideas of causation. Not only is this the case, but the reports of recent discussions and papers during the year show the keenest interest centred in the classification of disease.

Prof. Fraenkel, of Berlin, and Macintyre, of Glasgow, introduced a discussion upon the *Causation of Follicular Tonsillitis* at the summer meeting of the British Medical Association, and the remarks which followed showed how much the majority of observers are impressed with the importance of studying the pathogenic micro-organisms to which most acute affections are now attributed, although their identity has not yet always been established. No doubt, as pointed out elsewhere, the subject of greatest interest in diseases of the region has been associated

with the consideration of the Klebs-Loeffler bacillus and its life-history, together with the attempt to prevent mortality by the use of antitoxin.

John Sendziak (like many others) has contributed to the subject in a series of papers published in our JOURNAL during the year, under the heading of so-called *Follicular Angina and its Relationship to Diphtheria*.

The study of the acute inflammations of the pharynx and adjoining regions has been pursued with an amount of zeal never excelled in the past: the relationship of certain causes to the effects, the local and constitutional evidences to be observed, are all being carefully judged from the same standpoint. And now that the attention of the profession has been thoroughly awakened to the importance of the study of etiology further developments must soon follow, not only in classification but in prophylaxis—and it is to be hoped also in therapeutics. While etiology has attracted a considerable amount of attention, a large number of observers have been devoting themselves to the study of therapeutics. As usual, a considerable number of improvements have been suggested in surgical apparatus, and cases have been recorded in abundance. If, therefore, we have not had any startling discovery to record, there is, as we have pointed out, sufficient evidence of continued interest and vitality in the study of disease of these regions.

LARYNX.

A large number of papers have again been published upon the affections of this organ, and much interest is attached to the clinical work; while physiology and anatomy have been still further investigated. A prominent paper is that read by Risien Russell in the section of Laryngology at the British Medical Association Meeting in London last year. The writer of this paper has gone carefully into the subject of the work done previously by Horsley, Semon, and others. In a careful series of experiments, ingeniously devised and successfully carried out, by means of separating the abductor from the abductor fibres in the recurrent laryngeal nerves he has been able to show that there is a centre for abduction in the cortex. The President (Felix Semon) congratulated Risien Russell upon the splendid results, and said the merit of having actually discovered the abductor centres in the cortex undoubtedly belonged to Russell.

Onodi, at the Sixty-sixth Congress of the German Naturalists and Physicians of Vienna, in their Laryngological section again wrote upon the *Centres of Phonation in the Brain*, and gave another interesting contribution to the relationship of the accessory nerves to the innervation of the larynx. His experiments were made upon dogs and rabbits, and the most thorough experiments in different directions led him to the conclusion that the accessory nerves take no part in the innervation of the laryngeal muscles.

An interesting discussion on the subject of *Chronic Laryngeal Stenosis* took place at the summer meeting of the British Medical Association, when the introductory paper was read by Prof. Massei, of Naples. The remarks which followed were extremely interesting, and showed the

necessity of further investigation in the difficult group included under this heading. The outcome of the discussion clearly pointed to the need for further work, especially in attempting to treat chronic and specific cases.

Perhaps one of the most interesting cases brought before any society was one shown at the above-mentioned meeting on behalf of Solis Cohen. This case, published elsewhere, created a considerable interest on account of its unique character. The patient had suffered from malignant disease of the larynx, and the whole organ had been removed. The trachea had been cut across and stitched to the neck, so that all communication with the pharynx was completely cut off. Nevertheless, the man was able, by swallowing the air in some peculiar way, to produce a voice, without artificial apparatus, and one which could be heard distinctly in a large room. The physiological as well as the pathological conditions in this case give rise to many reflections. That one should be able to speak without a larynx at all is a fact which may well cause physiologists to reconsider many theories at present in vogue respecting the production of the voice and the true position which the larynx occupies in its highest development.

The ever-interesting and constantly-recurring subject of *Surgical Interference in Laryngeal Tuberculosis* was once more brought prominently under the consideration of the profession by the excellent papers read at the British Laryngological Association meeting in July by T. Heryng, of Warsaw, and Prof. Krause, of Berlin. Those who were present at the meeting will always remember it with great interest on account of the care with which these papers were presented. Heryng showed a considerable number of instruments—his own inventions—calculated to facilitate the removal of diseased portions of tissue in this distressing affection. While many of the views expressed have in some quarters been considered as too sanguine in nature, yet the result of the discussion showed the possibility of considerable advancement in the treatment of laryngeal tuberculosis, and that the profession as a whole might have more to expect in the future than had been anticipated in the past. The general feeling seemed to be that the methods of treatment under consideration deserved at least further consideration on the part of the profession.

Another interesting discussion took place at the British Medical Association meeting in July on the *Indications for the Early Radical Operation in Malignant Disease of the Larynx*. Bryson Delavan, of New York, and Butlin, of London, introduced this discussion. The necessity for early recognition of the growths; the perfecting of operative procedure; the necessity of skill and experience on the part of the surgeon; the possibility of treatment by other methods; and the most recently advanced views upon the subject of operation in the early stages of the disease, were all considered and dwelt upon. The subject is one of those which afford considerable room for difference of opinion, and, consequently, this contribution is all the more valuable.

As in the case of the pharynx, the therapeutics have not been forgotten, and many instruments have been suggested. Notably, amongst

others, great attention has been paid to the various forms of sprays and nebulizers for the medication of the larynx and the parts of the respiratory tract lower down. What we have said of etiology, clinics, and therapeutics is equally true of the literature bearing upon this region, and careful observation of the publications of the past year must convince anyone of the advance which has been made in the study of the principles of, and their application in, laryngeal surgery.

Macintyre.

OTOLOGY.

In the following retrospect the number placed immediately after the title of any paper or the name of its author indicates the page in the volume of the JOURNAL OF LARYNGOLOGY for 1895 where the paper, or its abstract, is to be found. At the same time, for the benefit of those not possessing this volume, the original source is carefully indicated, and, to economise space, certain abbreviations will be employed, of which the following alone require explanation :—

- | | |
|-------------------------|--|
| "Fr. Soc." | The French Society for Laryngology and Otology. |
| "Par. Soc." | The Parisian Society for Laryngology and Otology. |
| "Germ. Cong., Vien."... | The Sixty-sixth Congress of German Naturalists and Physicians, Vienna, 1894. |
| "Ann. des. Mal." | "Annales des Maladies de l'Oreille," etc. |
| "B. M. J." | "British Medical Journal." |
| "Dutch Soc." | The Dutch Society of Laryngology, Rhinology, and Otology. |
| "Flor. Cong."..... | The Fifth International Congress of Otology, Florence, September, 1895. |
| "Belg. Cong."..... | The Sixth Annual Meeting of Belgian Otologists and Laryngologists, Brussels, June, 1895. |
| "B. L. A." | British Laryngological Association. |
| "B. M. A." | Annual Meeting of the British Medical Association, London, 1895, fully reported in the "British Medical Journal," 1895, Vol. II. |

ANATOMICAL POINTS AND PECULIARITIES.—The *Anatomical Relations of the Membrana Tympani and their Pathological Importance* were treated of by Lake (690) in a paper read before the British Medical Association, and the same author contributes the description of a preparation presenting an *Abnormality in the course of the Chorda Tympani* (690, "Lancet," Jan. 5, 1895). Thomba found in one case a *Supernumerary Ossicle* (318, "Germ. Cong., Vien."). The *Morphogenic Homology of the Internal Ear* has been ingeniously studied by Bonnier (223, "Par. Soc.," July 6, 1894) in its relations to the "lateral line."

PHYSIOLOGY.—The *Physiology of the Middle Ear* was discussed by Secchi and others (827, "Flor. Cong."). They insisted on the "air-capsule" action of the tympanum, and regarded the ossicular chain as of

very secondary importance. Bonnier (429, "Med. Week.," Jan. 4, 1895) gave a study of the *Normal Tension of the Labyrinthine and Cerebro-Spinal Glands*, and the agencies by which the necessary equilibrium is maintained.

AURICLE.—*Malformations of the Auricle* were described by Cartaz (221, "Par. Soc.," March 5, 1894), Gruber (313, "Germ. Cong., Vien.") and Rohrer (74, "Germ. Cong., Vien."). Hollinger (755, "Arch. of Oph. and Otol.," April, 1895) described an operation for the replacement in the normal position of a very much deformed and displaced auricle. An *Artificial Ear* was adapted by Grove in one case (427, "Lancet," Feb. 2, 1895). A case of *Symmetrical Gangrene of the Ears* was observed by Tweedy (495, "Lancet," March 23, 1895), one of *Bilateral Hematoma of the Lobule* by Randall (299, "Arch. of Otol.," Vol. XXIII., No. 3), and one of *Cornu Cutaneum Auriculæ* by Coosemans (811, "Flor. Cong.").

EXTERNAL MEATUS.—*Foreign Bodies* were observed by Ménière—an aurilave sponge—(222, "Par. Soc.," June 1, 1894), and Sikkell (468, "Dutch Soc.," July, 1894). The latter removed a cherry-stone by means of a funnel of india-rubber on the end of a funnel of metal. Ledermann (756, "Arch. of Oph. and Otol.," April, 1895) enumerates a variety of animate and inanimate objects removed by him from the meatus. *External Otitis* occurred in furuncular form in both ears in a case of typhoid fever seen by Sikkell (468, "Dutch Soc.," July, 1894). MacCuen Smith advocates the carbol-menthol treatment of *Furunculosis of the External Auditory Canal* (427, "Med. News," Jan. 19, 1895). In a case under Ledermann (757, "N. Y. Med. Journ.," May 18, 1895) *Diffuse External Otitis* appeared to result from the use of drops containing imperfectly dissolved carbolic acid. Dunn describes a case of *Otitis Externa Hemorrhagica* (299, "Arch. of Otol.," Vol. XXIII., No. 3), and Lake several of *Keratosis Obturans* (893, "B. L. A."). In the latter salicylic acid was found beneficial. *Oto-mycosis* was found by Hight to be very frequent in Singapore (429, "B. M. J.," March 9, 1895). Hermet, in *Eczema of the Meatus*, employs a ten per cent. solution of nitrate of silver (221, "Par. Soc.," May 4, 1894). *Aural Exostosis*, in a case under Taylor (152, "B. M. J.," Oct. 20, 1894), was successfully removed by chisel after detachment of the auricle. Hovell, in a case in which the exostosis was close to the external orifice, drilled a hole in the growth and inserted a screw, by which he pulled it away (157, "B. M. J.," June 16, 1894).

MIDDLE EAR.—*Senile Changes in the Middle Ear* take the form of stiffening of the joints, according to Ferreri (814, "Flor. Cong."), more frequently than of nerve changes. *Traumatic Perforations* were studied by Corrado Corradi (814, "Flor. Cong."), who found them difficult to produce by indirect violence on the dead subject. Welsford observed a case of rupture of both drums by cough (150, "B. M. J.," July 14, 1894). Lake gave interesting statistics and observations showing an unexpected frequency of *Facial Paralysis in Recent Otitis Media* (335, "B. L. A."). In the treatment of *Chronic Dry Catarrh* Bronner recommends the use of intra-tympanic injections (150, "B. M. J.," Oct. 13, 1894).

of solutions of bicarbonate of soda in paroline. Delstanche, who introduced this treatment, employs liquid instead of solid vaseline, as formerly (815, "Flor. Cong.," and 326, "Germ. Cong., Vien.,"). Dundas Grant showed a case of indrawn cicatrix in which he employed with advantage massive injections of paroline driven into the tympanum through a Weber-Liel's intra-tympanic catheter (884, "B. L. A."). Deschamps advocates the inflation of air which has bubbled through a five per cent. water solution of formol (150, "Ann. des Mal.," April, 1894). Gradenigo regards intractable sclerosis of the middle ear as in many cases a parasymphilitic affection in late hereditary syphilis (78, "Germ. Cong., Vien.,"). Park (427, "Arch. of Oph. and Otol.," Jan. 1895) advises, as a new and more convenient instrument than the Politzer air-bag for inflating the middle ear, a conical nose-piece connected with the air-tank—a view in which many will differ from him. Mobilization of the stapes received renewed commendation from Miot (91, "Fr. Soc.,"), and Gellé ("Par. Soc.," Jan. 5, 1894) narrated benefits derived from liberation of it by incisions through contracting granulation tissue surrounding it. Marple, in a paper on the successful mechanical treatment of some unusual aural complications (754, "N. Y. Med. Journ.," June 1, 1895), mentions the advantageous use of the bent strip of soft rubber first introduced by Clarence Blake. So-called "oto-massage" receives complete condemnation from Burnett (755, "Med. News," Aug. 10, 1893), exception being made of Urbantschitsch's exercises; and Chevalier Jackson retorts (*ibid.*) that all depends on the skill of the manipulator. A case of *Clonic Spasm of the Tensor Tympani* is narrated by Hefleblower (754, "N. Y. Med. Journ.," Mar. 6, 1895). In view of serious hæmorrhage having in several recorded cases arisen during paracentesis of the membrane, the *Recognition of the Protrusion of the Bulb of the Jugular Vein into the Tympanum during Life* is studied by Gompertz (309, "Germ. Cong., Vien.,"). Some interesting cases of *Sarcoma* have been brought forward, one by Haug (326, "Germ. Cong., Vien.,"), affecting the pharyngeal orifice of the tube; one by Ménière (221, "Par. Soc.," April 6, 1894), in the middle ear of a child; and one by Kirchner (817, "Flor. Cong.,"), imbedding the petrous bone.

SUPPURATIVE INFLAMMATIONS OF THE MIDDLE EAR.—The rational treatment of acute otitis media is described by Gradenigo (431, "Med. Week.," Feb. 9, 1895), who deprecates air-douches and syringings, and advises drainage by means of a wick of iodoform gauze, filling the meatus, while the throat and nose are carefully treated. Du Fougeray (899, "Fr. Soc.") advocates this method. Helme and Lermoyez (738) insist on the preponderating influence of the staphylococcus in determining suppuration in the ear, and lay down formal rules for ensuring asepsis in otology. Gradenigo replies as to the sharing in the mischief by other bacteria. He, along with Pes, describe a few cases in which they got almost pure cultures of the bacillus pyocyaneus (495, "Bull. des Mal. de l'Oreille," Nov., 1894). In a bacteriological investigation of the suppurative ear discharge occurring as a complication of scarlet fever, Blaxall (149, "B. M. J.," July 21, 1894) found in most

cases the streptococcus pyogenes, and in none the diplococcus pneumoniae. In the aural pus from a case of otitis media following pharyngeal diphtheria, Kutscher (431, "Deut. Med. Woch.," No. 10, 1895) found true Loeffler bacilli. F. P. Ball draws attention to the occurrence of otitis

media as a complication of pneumonia (854, "Med. News," Sep. 21, 1895), and insists that, whenever "head symptoms" come on in the course of broncho-pneumonia, the ear should be examined. Galletti reports some cases in which otitis media occurred in consequence of plugging the posterior nares (431, "Archiv. Ital. di Otol.," Vol. III., 1895). Bar (815, "Flor. Cong.") described the unexpected supervision of otitis as a complication of the operation for adenoids, where every antiseptic precaution had been taken. In cases of purulent inflammations of the middle ear, in which there is a small perforation at the point of a mammilliform projection on the drum (320, "Germ. Cong., Vien."), Bing applies a drop of liq. ferr. sesquichlor. to the seat of the perforation. Szenes believes that obstinate middle-ear suppuration sometimes ceases when complicated by the occurrence of acute external otitis (76, "Germ. Cong., Vien."). Similar views were expressed by him, Colladon, and others at the Rome Congress in 1894. The treatment of intractable middle-ear suppuration by operation through the mastoid is advocated by Barr (688, "B. M. A."), and by large openings of the cavity of the middle ear by Luc (92, "Fr. Soc."). On the other hand, very fair results were obtained from the conservative method of treatment in chronic suppuration of the upper cavities of the tympanum by Gompertz (322, "Germ. Cong., Vien."). This consisted chiefly in cleansing and the skilful use of fine celluloid canulæ for the insufflation of powders into the affected loculi. Browne describes five cases of attic disease treated by a modified Stacke's operation (688, "B. M. A."), and Hicguet another in which, after operation, the patient's general condition underwent a marvellous change for the better, although the aural discharge did not cease (834, "Belg. Cong."). Hartmann gives some critical historical remarks on the operation for exposing the tympanic cupola space, attic, and the mastoid antrum (300, "Arch. of Otol.," Vol. XXIV., No. 1), in which he speaks in favour of a forceps for nibbling away the outer wall, like that devised by Gellé (215, "Par. Soc.," Jan. 5, 1894). The frequency with which chronic suppuration of the middle ear is tuberculous in nature was made the subject of important experimental research by Milligan (688, "B. M. A."), who found it to amount to eighty per cent. of "mastoid" cases. In the treatment of otorrhœa in scrofulous patients, Isaia (154, 430, "Med. Week.," Dec. 7, 1894) employs solutions of balsam of Peru in alcohol, for which he gives formulæ. A remarkable case of severe hæmorrhage arising from an aural polypus is described by Moure (825, "Flor. Cong."), the growth proving to be a cavernous angioma. Bing describes *Experiments on the Irrigation of the Tympanic Cavity* (319, "Germ. Cong., Vien."). He found that, in the presence of a large opening in the membrane, the Eustachian irrigation did not reach the attic and antrum, whereas it did so if the perforation was small. olitzer (*ibid.*) maintained the value of the process, in opposition to certain other speakers, who disparaged it on somewhat theoretical grounds. The *raporte* has seen ample evidence of its being indispensable.

MASTOID PROCESS, ETC. — Sune Y Molist pointed out certain peculiarities of *Wounds from Firearms* in the mastoid region (826, "Flor. Cong."), and notably the tendency for the momentum of the missile to be checked in the spongy tissue where it frequently lodged. *Auscultation* is used for the purpose of detecting sclerotic conditions of the mastoid by Okuneff (811, "Flor. Cong."), a vibrating tuning-fork being placed on some point of the skull while a flexible stethoscope is applied to the mastoid. Brieger (814, "Flor. Cong.") refers to the rarity of *Primary Otitis* of the mastoid. In a case of mastoiditis under the care of Buys (834, "Belg. Cong.") *Necrosis of part of the Occipital Bone* took place, and the sequestrum was extracted from an abscess cavity. *Cholesteatoma* received clinical and pathological study from Lichtwitz and Sabrazes (220, "Par. Soc.," March 5, 1894), and a case was brought forward by Dundas Grant (885, "B. L. A."). Körner's method of lining the mastoid cavity after chiselling (practically the same as Panse's) is recommended by Reinhard (314, "Germ. Cong., Vien.>"). The *Treatment of Mastoid Suppuration* is discussed by Lubet-Barbon and Martin (91, "Fr. Soc."), and Hamon du Fougeray (90, "Fr. Soc.") formulates certain rules, especially insisting on the forward direction of exploratory proceedings. Buck (755, "N. Y. Med. Journ.," June 29, 1895) emphasizes the unfavourable prognosis of operations upon the mastoid in *diabetic persons*, though the cases he narrates would indicate that the prognosis for the patient is worse if operation is withheld. Lubet-Barbon points out the occasional limitation of inflammation of the temporal bone in relation to its developmental constituent parts (829, "Flor. Cong."), but indicates that this is exceptional. In a case of Körner's of tuberculosis of the temporal bone *extension to the Base of the Temporo-sphenoidal Lobe* took place (430). Moos published a case of a *Hitherto Undescribed Course of a Disease of the Mastoid Process* (299, "Arch. of Otol.," Vol. XXIII., No. 3), in which, owing to the persistence of the squamo-mastoid fissure in adult life, a very large mastoid abscess supervened rapidly during an acute otitis.

THE MORE DANGEROUS SEQUELÆ OF SUPPURATIVE INFLAMMATION OF THE MIDDLE EAR.—Macewan (688, "B. M. A.") introduced a discussion on *Cerebral Complications in relation to Middle Ear Disease*, developing further the views advocated in his well-known classical work, and Barr advanced similar opinions (817, "Flor. Cong."), of which a very full and interesting report will be found in the JOURNAL. A very minute and instructive clinical study of different forms of *Severe Complications of Otitis* will be found from the pen of Paul Schubert (224, "Germ. Cong., Vien.>"). including abscess, sinus-phlebitis, and pyæmia without sinus-phlebitis. Cases illustrating *Otitic Abscess of the Brain* are published by Knapp (301, "Arch of Otol.," Vol. XXIII., No. 3), Brieger (311, "Germ. Cong., Vien.>"). and Murray (300, "B. M. J.," Jan 5, 1895), and *Cerebellar Abscesses* by Bacon (757, "Amer. Journ.," Aug., 1895) and Heymann (867, "Flor. Cong.>"). An unusual case of acute suppuration of the middle ear, with *Septic Thrombus of the Jugular Vein and Pyæmia without involvement of the Mastoid Antrum*, is related by

Barling (854, "Birmingham Med. Rev.," Oct., 1895), and one of *Thrombosis of the Cavernous Sinus* in acute purulent inflammation of the middle ear by Kircimer (319, "Germ. Cong., Vien.").

NOSE, NASO-PHARYNX, ETC., IN RELATION TO THE ORGANS OF HEARING.—*Turbinotomy in Connection with Tinnitus Aurium* was strongly recommended by Carmalt Jones (689, "B. M. A.") on the strength of very extensive experience of the operation. Dadysett (554) brings forward a case in confirmation of this view, and MacNaughton Jones (816, "Flor. Cong.") attributed to it a modified value and in only a few selected cases. The reporter has employed it in a number of cases with great satisfaction. Alderton gives a curious statistical study on the *Influence of Affections of the Upper Air Tract upon the Ear* (428, "Ann. Oph. and Otol.," Jan., 1895).

Antiseptics in Intra-nasal Surgery was the subject of a paper by St. Clair Thomson (824, "Flor. Cong."), who considered the nasal mucous membrane a self-acting sterilizing medium, and held that the aseptic precautions detailed by Lermoyez and Helme (738, "Ann. des Mal.," Jan. and June, 1895) were unnecessary, besides being more cumbrous than the use of chemical antiseptics. The reporter emphasizes the difference between a diseased and a "healthy" nasal mucous membrane as a sterilizer. Brieger (824, "Flor. Cong.") thought that safety *quâ* sepsis lay in removing only small portions of the mucous membrane at a time.

Adenoid Vegetations were discussed by Versandt Arslan (810, "Flor. Cong."), who always operated under bromide of ethyl anesthesia.

INTERNAL EAR, AUDITORY NERVE, ETC.—The *Pathological Changes in the Labyrinth*, as observed by himself and others, are fully passed in review by Politzer (795, "Flor. Cong."). Scheibe found *Anomalies of Formation in the Membranous Labyrinths* of two deaf-mutes, which suggest the possibility of Reissner's membrane arising from the stria vascularis (319, "Germ. Cong., Vien."). A case of *Acute Boiler-maker's Deafness*, under Urbantschitsch (316, "Germ. Cong., Vien."), improved under suction in the meatus and inflation through the Eustachian tube, suggesting a spasm of accommodation of the intra-tympanic muscles. Goldstein describes fully a case of *Exfoliation of the Cochlea, Vestibule, and Semicircular Canals* (391), with remarks on the amount of hearing power and the faculty of equilibration maintained. In a case of Gruber's, of *Extrusion of the Cochlea* (313, "Germ. Cong., Vien."), there were differences of opinion as to the presence of some perception of sound. The *Treatment of the various Forms of Nerve-Deafness* was the subject of a discussion before the British Medical Association, opened by Dundas Grant (687, "B. M. A."), and continued by Lewis Jones, who had found benefit follow the use of electricity in some cases of deafness produced by noise. The necessity for accurate diagnosis and for the recognition of functional dulness of hearing was emphasized by the introducer. Schirmunsky, studying the effect of *Pilocarpin in Diseases of the Middle Ear and Labyrinth* (430, "Monats. für Ohrenheilk.," Feb., 1895), found it useful in recent effusions into the labyrinth, but useless in other cases. Thomas treats internal otitis invariably as if syphilitic (92, "Fr. Soc."),

and reports a fair measure of success. Gradenigo attaches considerable importance to internal treatment based upon a proper clinical appreciation of the general condition and tendencies (813, "Flor. Cong."). In four cases treated by Barclay Baron with injections of pilocarpin (151, "B. M. J.," Dec. 1, 1894), one improved at once, another after several months, and in the others the results were negative. In the *Treatment of Ménière's Symptoms*, Dundas Grant (386, "B. L. A.") recommended pilocarpin in recent cases only. Small doses of quinine were found of special value when the symptoms arose from middle-ear disease—"pseudo-Ménière's disease." Calomel was advised when there was pulse-tension. Labit (92, "Fr. Soc.") reports several cases of recovery from acute "Ménière's disease" under pilocarpin, and Galloway (429, "B. M. J.," March 9, 1895) one in which bromide and iodide of potassium were beneficial. In a case of labyrinthine disease Guye observed a not yet described form of rotatory sensation (689, "B. M. A."), in which objects appeared to turn from right to left; and when slight there was involuntary movement in the same direction, but when severe in the opposite one. Cases of *Hysterical Deafness* were brought forward by Cartaz (88, "Fr. Soc.") and by Hector Mackenzie (495, "Lancet," March 16, 1895), the latter effecting a cure by re-education of the hearing centre. Rohrer (74, "Germ. Cong.") maintains a distinction between *Hysterical Deafness* and *Torpor of the Acoustic Nerve*, the hearing defect being similar in both, but hystero-neurasthenic symptoms being absent in the latter. *Partially-acquired Tone-Deafness* (309, "Germ. Cong., Vien.") was observed by Gradenigo; one infantile, another from intra-cranial auditory neuritis, the other probably from cochlear hæmorrhage. In a case of *Unilateral Deafness and Blindness following a Revolver Shot in the Chest*, under Jouslain (222, "Par. Soc.," May 4, 1894), the condition was probably reflex and due to nervous shock. Collet in a paper on *Auditory Disturbances in Tabes Dorsalis* (432, "Presse Med.," Jan. 12, 1895) attributes the deafness to disease of the nuclei of the auditory and of the trophic—fifth—nerve. Ménière adds a case of *Leucocythæmic Deafness* (455, "Par. Soc.," Jan. 4, 1895) remarkable by the absence of any previous ear disease.

Diplacusis.—In a case of Gradenigo's (429, "Arch. of Otol.," Vol. XXIII., No. 4) monaural diplacusis was harmonic and due to disease of the middle ear. Hans Daae narrates an unusual case in which the binaural diplacusis was not harmonic, and yet it was cured by treatment directed to the middle ear (428, "Arch. of Otol.," Vol. XXIII., No. 4). It will be remembered that non-harmonic diplacusis is usually due to disease of the auditory nerve, which, the abstractor suggests, may have escaped detection in this case.

DEAF-MUTISM.—Szenes (75, "Germ. Cong. Vien.") tested the residuum of hearing present in a number of deaf-mutes, and in many it was considerable, but not such as he would consider sufficient to justify their removal from a deaf-mute institution.

REFLEX DISTURBANCES.—*Auricular Reflexes* are enumerated and analyzed in a truly academical manner by Bonnier (217, "Par. Soc.,"

Feb. 5, 1894), intrinsic and extrinsic reflexes of all sorts—compensatory, accommodative, synergic, etc., etc.—receiving attention. Gellé, in discussing *Auricular Inhibitions*, attributes to inhibition certain phenomena usually explained by fatigue (92, "Fr. Soc."). Masini found the *Influence of Lesions of the Organ of Hearing on Respiratory Changes* was to diminish the elimination of carbon dioxide, but only if the semicircular canals—not the cochlea—were involved (827, "Flor. Cong."). *Ear-Faints and Epilepsy* are apt to be confounded, and Hobby (151, "Ann. Oph. and Otol.," Oct., 1894) discusses the differential diagnosis.

THE CENTRAL NERVOUS SYSTEM IN RELATION TO AFFECTIONS OF THE HEARING ORGANS.—*Acoustic Neurasthenia*, as understood by Alderton (157, "Ann. Oph. and Otol.," Oct., 1894), corresponds very much to *Torpor of the Acoustic Nerve* of Rohrer (74, "Germ. Cong., Vien.") and *Hysterical Deafness* of Gradenigo (*ibid.*).

The *History of a Brain Tumour* given by Moos (432, "Arch. of Otol.," Vol. XXIII., No. 4, contains much information. The comparative infrequency of deafness in cases of brain tumour is referred to. Burger gives a case of *Syphilitic Paralysis of Cranial Nerves* (460, "Dutch Soc.," July 1, 1894, including auditory, facial, sixth, vago-accessory, glossopharyngeal, and trigeminal, with left hemiparesis. A very interesting case of complete deafness following acute meningitis, with the diplococcus of Fraenkel, was narrated by Grazi (830, "Flor. Cong.").

The *Vestibular Cortical Centre*, according to a case investigated before and after death by Bonnier (223, "Par. Soc.," July 1, 1894), seems to be situated in the ascending parietal convolution. *Auditory Localization*, according to the same author (221, "Par. Soc.," April 6, 1894), is determined by the direction of the impact of sound waves on the membrane imparting a greater or less obliquity to the pressure of the stapes on the sacculæ.

MEANS OF DIAGNOSIS, TESTS FOR HEARING, ETC. — *The Functional Examination of the Hearing Power* for tones of various pitch has been much studied by Gradenigo (Schwartz's "Handbuch der Ohrenheilk.," Vol. II.), and he has endeavoured to facilitate the complicated procedure by devising a means of a mechanical arrangement for setting tuning-forks in vibration with a definite degree (four different degrees) of force (829, "Flor. Cong."). His method of graphically determining the total *Field of Audition and Auditory Acuity* was carried out by Zwaardemaker (464, "Dutch Soc."), and further considered by himself (79, "Germ. Cong., Vien."). He found Koenig's rods give more accurate results than Galton's whistle. The relation between hearing for speech and that for tones in general was investigated on this footing by Zwaardemaker ("Arch. of Otol.," Vol. XXIII., No. 4, who confirmed the observation that in nerve-deafness hearing for speech is relatively less impaired—in middle-ear disease the reverse. *The Hearing Power of the Aged* was examined by Bezold (297, "Arch. of Otol.," Vol. XXIII., No. 3, who found in a considerable portion of comparatively defective hearing a "positive" Rinne, and in general a diminution of bone-conduction only proportional to that of air-conduction. Zwaardemaker's *Presbycusis Law* (200, "Arch. of Otol.," Vol. XXIII., No. 3), founded on observations on normally-

hearing persons, showed a lowering of the upper limit of audition from e' of childhood down to a' or g' , anything lower than this being attributable to disease rather than senility. *Investigations with Tuning-Forks of Middle Register in over Six Hundred Cases* were carried out by Alderton (298, "Arch. of Otol.," Vol. XXIII., No. 3), confirming in a most valuable way many of the inferences derived from the methods as usually practised.

INSTRUMENTS, REMEDIES, ETC.—Courtade has devised an *Hermetic Covering for Sieglé's Speculum*, a *Universal Handle for Instruments with Variable Angle*, and a *Hook for Pressure and Spring Traction* (216, "Par. Soc.," Jan 5, 1894), also a *Sliding Indicator for the Eustachian Catheter* (223, "Par. Soc.," Jan. 1, 1894). Delstanche has effected a *Modification in Massage Instruments for the Tympanum*, increasing their strength (839, "Belg. Cong.,"). The *Aural Auscultation Tube* has been made more handy by Cheate (150, "B. M. J.," Sep. 22, 1894) by the adaptation of a head spring to keep it in the surgeon's ear; and Moll has made it more clean (470, "Dutch Soc."), by fitting movable glass tips to the patient's end, an improvement noticed by the reporter in the clinic of Drs. Lubet-Barbon and Martin in Paris. An *Ear-Bandage* devised by Hartmann (311, "Germ. Cong., Vien.") should commend itself. Plicqué describes the scope of *Electricity in Otology* in an appreciative and temperate spirit (755, "Ann. des Mal.," Sep., 1894). Mounier (900, "Fr. Soc.") believes it hastens recovery of hearing during convalescence from acute aural affections. Lewis Jones and Grant (687, "B. M. A.") found it beneficial in nerve-deafness produced by exposure to noises. Freudenthal recommends *Electro-vibratory Massage* with improved instruments (853, "N. Y. Med. Journ.," Sep. 28, 1895), and Lester describes an *Electric Pressure-Sound for the Direct Vibration of the Membrana Tympani* (754, "N. Y. Med. Journ.," June 8, 1895). The use of *Local Massage in the Treatment of Chronic Eczema of the External Ear* was advised by Bronner (830, "Flor. Cong.,"). Jouslain describes an *Electric Tuning-Fork* (223, "Par. Soc.") well adapted for Gellé's tests, though the mechanism does not seem applicable to forks of the extremes of pitch. An instrument of immense value to operators is Max Thorner's *Mastoid Retractor*, fully described in the JOURNAL (869). The *Action of Artificial Drums* was discussed by Gompertz (324, "Germ. Cong., Vien."). Their special indications were epidermized tympanic lining and postero-superior perforation. Ward Cousins brought forward an *Improvement in Artificial Drums*, from which he appeared to have got good results, although others had found the ordinary cotton-wool drum more efficacious (690, "B. M. A."). Cresswell Baber showed *Dummies for Illustrating and Teaching Diseases of the Naso-pharynx* (689, "B. M. A."). Pins recommends a *Nasal Douche which occasions Spontaneous Closure of the Eustachian Tube* (325, "Germ. Cong., Vien."), the douche being actuated by the patient's own blowing; and Ziem, for the same purpose, a force pump fitting tightly into the nose, so that the fluid may not be mixed with air (326, "Germ. Cong., Vien."). Szenes dwells on the *Therapeutical Value of Glycerine of Carbolic Acid and Menthol* in diseases of the ear (77, "Germ. Med. Cong."), which we can quite reinforce, always postulating

that the drugs be not reprecipitated by the addition of water. The *Influence of Methodical Hearing Exercises upon the Hearing Sense* was brought forward by Urbantschitsch (316, "Germ. Cong., Vien."), and has been made familiar to English readers by Goldstein. An interesting *Demonstration of Instruments* was given by Delstanche before the Congress of Otology at Florence (319).

MALIGNANT DISEASE OF THE ORGANS OF HEARING. — Danziger (756, "Monats. für Ohrenheilk," July, 1895) gives a contribution to the *Case-History and Etiology of Carcinoma of the Organs of Hearing*, offering as etiological factors an old-standing otorrhœa and the habit of poking sharp instruments into the ear. Kirchner's case of *Sarcoma of the Petrous Bone* (817, "Flor. Cong.") illustrates the grafting of neoplastic growth on a long-standing inflammation. In a case of Bacon's (854, "N. Y. Med. Journ.," Aug. 31, 1895) there was a *Sarcoma of the Neck, involving the Tonsil and causing Deafness*. Ménière's case of *Ossifying Sarcoma in the Ear* of a child is referred to in connection with the middle ear.

TINNITUS AURIUM.—The *Treatment of Tinnitus Aurium* was fully reviewed by Miot and Herck (698, "Fr. Soc."). Dalby and Baber brought forward cases of *Objective Tinnitus audible on Auscultation* (687, 689, "B. M. A."). Carmalt Jones considers *Turbinotomy in connection with Tinnitus Aurium* an operation of great value (689, "B. M. A.").

MISCELLANEOUS.—The *Paracusis of Willis* is attributable, according to D'Aguzzo (828, "Flor. Cong."), to relaxation of the ligaments or degeneration of the muscles of the tympanic ossicle. Verdos studied the *Aural Disturbances arising from Explosions of Dynamite* (828, "Flor. Cong.") owing to the opportunity afforded by the outrage in the Lyceum Theatre, Barcelona. Some *Peculiarities of the Negro in Otology* afforded De Roaldes the subject for an interesting paper (828, "Flor. Cong.").

Heymann has given interesting *Statistics of Ear Diseases* (865, "Flor. Cong."); Gellé a contribution to the *General Constitutional Treatment in Diseases of the Ear* (810, "Flor. Cong."), which, he thinks, is too much neglected.

REVIEWS have been given of the following works bearing on diseases of the ear :—

McBride, P., "Diseases of the Throat, Nose, and Ear" (152-157).

Miot and Baratoux, "Diseases of the Ear and Nose" (161).

Mygind, Holger, "Deaf-Mutism" (238).

Hovell, T. Mark, "Diseases of the Ear" (301).

Jacobson, "Text-Book of Otology" (395).

Dench, E. B., "Diseases of the Ear" (721).

Dundas Grant.

ON AUSCULTATION OF THE MASTOID PROCESS, WITH REGARD TO SCLEROSIS.

By Dr. OKUNNIEF (St. Petersburg).

Read before the Fifth International Congress of Otology, Florence, 1895.

THE importance of a solution of the question as to whether, in a case of chronic suppuration, the mastoid process is sclerosed, is obvious to every specialist, and the possibility of detecting it would materially simplify the determination of the treatment. When one has before one's eyes a sufficient means of diagnosing sclerosis, the pathological conditions appear in another light and attain a new value.

High fever, rigors, and sweats must be taken as indications of a serious deep-lying affection, as, for example, thrombosis of the transverse sinus, beginning pyæmia or septicæmia. Further, it must be remarked that cases of chronic suppurative inflammation of the middle ear run an exceptionally bad course when in their various exacerbations they are complicated by a sclerosis of the mastoid process; they then become dangerous to life. With sclerosis of the mastoid process and obliteration of the cellular structure, the possibility of the pus working its way outwards is done away with, and there disappears every protective barrier which ordinarily holds back the accumulation of pus, and in this way protects the organism for a long time from any serious danger. In sclerosis, the pus in the mastoid cells can neither perforate nor remain in them; it must find new routes: and as, in such cases, the inflammation is retained in the deeper layers of the temporal bone, the pus must, therefore, make a way for itself towards the sinuses and the meninges.

In view of the fact that in this form of disease pain and infiltration of the soft parts of the mastoid process are absent, the condition dangerous to life may come on almost unnoticed by the surgeon, as well as by the patient. From the absence of pain in the mastoid, as well as in the ear, the patients cannot understand the necessity for an operation, and look upon it as useless. If they agree to it, it is even then with great unwillingness and with the utmost mistrust. In most cases the only indication remaining for the surgeon is the high temperature, which is frequently mistaken for another disease: as, for example, the influenza of later days. In point of fact, the position of matters becomes distinctly worse. The high temperature is a sign of beginning septicæmia or pyæmia, resulting from the absorption of the products of suppuration in the breaking down clot. It is obvious that in chronic suppurative otitis, with sclerosis of the mastoid, elevation of the temperature is a *memento mori*, and that the sooner operation is undertaken the more chance is there of a favourable result. On the one hand, we may look upon sclerosis of the mastoid as a natural attempt on the part of the organism to protect itself from the purulent focus lying in its neighbourhood, because, when this goes on normally in the neighbourhood round the

collection of pus, the danger to life is distinctly diminished. Then purulent suppurations of the middle ear which are complicated with sclerosis of the mastoid, cannot be distinguished by their disturbed course from ordinary cases not so complicated. The difference between the one and the other depends in the first place upon the supervention of elevation of temperature. Those complicated by sclerosis are, in general, characterized by rigors, sweats, headaches, or, at all events, a feeling of weight in the head. The headache is localized most frequently in the neighbourhood of the temples; sometimes the forehead. In the mastoid region there is not the slightest tenderness, nor any infiltration of the soft parts. Some patients will strike their mastoid with the fist in order to prove to their attendant the absence of any local tenderness. Certainly, in some cases there are temporary attacks of pain in the region, but which only last for a short time, and rapidly completely disappear under the action of leeches and blisters.

The only symptom which we have so far is, in most cases, the high pyrexial temperature. Thanks to auscultation of the mastoid process according to my method, we have a valuable indication, and a diagnosis can be quickly made as to the condition of the bones with which we have to deal. In this auscultation one observes that the tone of a tuning fork placed upon the skull is, in case of sclerotic change in the bone, heard louder upon the diseased side than upon the sound one. This is explained by the better conduction of tone through the sclerosed bone as being more compact. Mixed cases of sclerosis—that is to say, those in which, in a mastoid process with sclerosed bony tissue, carious spaces of small size are found—are the most difficult for diagnosis; in such cases repeated examination of the bones is necessary, so that serious attention may be given to the slightest dulness when it is permanent.

A few cases out of a series which I have examined will now be narrated in support of what I have said.

Case 1: A soldier, aged twenty-three, suffered with suppuration from the left ear since childhood. The left membrane was opaque, thickened, and had a perforation the size of a pea in the antero-inferior quadrant, the margins of which were hypodermised. The mucous membrane of the cavity was swollen and hypodermic, and there was a considerable discharge of pus through the perforation. The left facial nerve was paralyzed; the right membrana tympana showed nothing abnormal beyond a slight indrawing and opacity.

Treatment began on the 30th April with irrigations of a 4 per cent. solution of boric acid.

Shortly afterwards, pains began in the left ear, with infiltration and redness of the walls of the meatus, but improvement took place after the application of artificial leeches to the mastoid.

On the 14th of May there was tenderness of the left mastoid process without infiltration of the soft parts, and the patient complained of rigors. Blisters were applied to the mastoid process, and internally muriate of quinine was administered. Since his entrance into the hospital his temperature was normal, but on the 14th of May it became pyrexial, and the patient complained of rigors, lassitude, diminution of appetite, sleeplessness, and night sweats. The pupils were dilated, but active. After the blisters the tenderness of the mastoid completely disappeared, and forcible percussion occasioned no pain. On the 22nd

of May pain was felt at the left angle of the lower jaw in front of the sterno-mastoid, where, in the depth of the hollow, an affected gland could be felt, of the size of a pigeon's egg. On examination of the bone conduction (auscultation of the mastoid), there was recognized in the upper and lower thirds a clear loud tone from the tuning fork, louder in character than normal, while in the middle third was a slight dulness of the tone.

Diagnosis :—Sclerosis of the mastoid process in its upper and lower thirds. Development of granulation tissue in its depths and thrombosis of the lateral sinus. Trepanation of the mastoid on May 23rd.

Conditions found on operation : Corresponding to the dulness of tone in the middle third of the mastoid process, at a point two millimètres from the posterior wall of the osseous meatus an opening was made in the bone. This was found to be sclerosed, and yielded to the chisel with great difficulty. The middle and inferior thirds of the process were sclerosed throughout to the extent of more than a centimètre, and the middle third was more than half a centimètre. In the depth of the opening into the bone there was found a mass of granulation tissue bathed in pus, which was cleared away by means of a sharp spoon. After the removal of this, there was found as one reached the sinus a thick layer of thick pus, which welled up with pulsations under the sclerosed upper third of the mastoid. After enlargement of the osseous opening, so that half of the upper third of the mastoid process was removed, one came across the anterior wall of the lateral sinus, which was covered with granulations. Along with the removal of this, the anterior wall of the sinus had to be removed to the extent of a centimètre. The spoon was introduced upwards and downwards along the sinus, so that the thrombus could be no longer seen. Evidently the thrombus, which had already undergone purulent disorganization, had produced a change in the anterior wall of the sinus, so that the pus had made a way for itself to the mastoid process. The wound was cleansed with a mercurial lotion, one half per cent., dusted with iodoform powder, and plugged with iodoform gauze.

(At the present time the patient is still under my treatment.)

Case 2: A soldier, aged twenty-three, had had a purulent discharge from the left ear on and off since childhood. It had broken out again during the last three months. The patient was pale and anæmic. The left tympanic membrane was opaque and thickened, and in the lower segment there was a large perforation. During one and a half months the temperature had been perfectly normal, but then it suddenly rose to 39·5—40 C., with rigors and sweats.

The mastoid process showed on its outer surface no departure from normal. There was no tenderness whatever. On auscultation it was found that the sound of the tuning fork along the mastoid process was clearer and louder than on the healthy side. Leeches and fly-blisters produced no beneficial effect.

Diagnosis.—Mastoid sclerosis, thrombosis of the lateral sinus. Trepanation of the mastoid. Conditions found on operation : Throughout there was sclerosis of the mastoid process without a trace of cellular structure. The bone scarcely yielded to the chisel. Nowhere could either pus or granulation tissue be found, and the transverse sinus was not exposed. Communication between the operation wound and the middle ear was established, and an antiseptic bandage applied. On the third day after the operation death took place, and on *post-mortem* examination there was found thrombosis of the lateral sinus ; a purulent breaking down of the thrombus in the vertical portion of the sinus. Septicæmia.

Case 3: A Jew, aged twenty-three, who since childhood had had otorrhœa in the left ear. There was a large perforation in the anterior segment of the tympanic membrane, with epidermised margins. After treatment in the hospital for two

months there suddenly occurred high fever with rigors and night sweats, pain in the whole of the left half of the head, but especially in the left mastoid region. There was no infiltration of the soft parts, and no tenderness behind the ear. On auscultation of the mastoid process the sound was heard more clearly and louder than on the unaffected side. Leeching and blistering were of no use, and trepanation was decided on.

Conditions found on operation : Throughout there was sclerosis of the mastoid process ; the bone scarcely yielded to the chisel, and after communication was made with the middle ear an antiseptic dressing was applied. The pains in the head and the mastoid process disappeared immediately after the operation, and the patient got well.

In view of the fact that my method is unknown to many of my *confrères* here present, I take this opportunity to describe it and to report the results which it has given. I have to ask indulgence for repeating here what I have already published in the Zeitschrift "Bparr, 1893-94," as also in the "Archiv für Ohrenheilkunde," Vol. XXXVIII. I investigate the cranial bone conduction of sound, especially through the mastoid process, in the following way : I take an ordinary otoscopic tube with the usual tip at one end, which I introduce into my ear. To the other end I fasten, instead of the ordinary tip, an aural speculum of vulcanite of the smallest possible diameter. I place the latter upon the part of the head concerned, and, in the present instance, upon the different portions of the mastoid process and around it. When I have thus effected junction between the patient and myself, I take a suitable tuning fork¹, strike it upon a wooden object, and then place its stem upon the middle of the patient's skull, somewhat further forward, below the parietal eminence of the affected side. The investigation carried on in this way gives the following information : When the cranial bones are unchanged the tuning fork gives a clear sound ; when, on the other hand, a bone is diseased, the tone is duller over the seat of the pus or softened bone ; on the unaffected mastoid process the tone is as clear as on the neighbouring parts of the skull. On auscultation of a sclerosed mastoid the tone conducted through the skull is always clearer and more audible than on the unaffected sides ; hence the sclerosed bone is distinguished from the normal by its increased power of conducting tone.

Dundas Grant (Trans.).

CAVERNOUS ANGIOMA OF THE EAR.

By DR. E. J. MOURE (Bordeaux).

Read before the International Congress of Otology, Florence, 1895.

"IF one examines histologically a large number of aural polypi," writes Prof. Politzer, "we meet with two principal forms—round cell-polypi "and fibromata." A little further on he adds : "Some polypi of the tympanic cavity are traversed by numerous blood vessels, and these acquire "the character of cavernous polypi, or angiomata. According to the

¹ I have always used a tuning fork of 256 vibrations, set vibrating by the introduction of a rod of steel between the two blades which converge towards their points, the steel rod being pulled out from between them. Deeper tuning forks than this give so powerful a tone that they are heard through the other ear by air conduction, and confusion results from the sound being heard in this double manner. Higher tuning forks are also unsatisfactory, as their short lasting tone comes too quickly to an end. It is important for every otologist to practise himself in this auscultation of the mastoid process.

"opinion of all writers, true myxomata are by far the rarest, and if one runs through the medical literature it is easy to convince oneself that true angiomas are not very common. I have, in fact, within the last ten years found only one instance, that communicated by Dr. Huntington Richards (New York) to the American Otological Society. In this case, which was very shortly reported, but with lithographic plates, the patient was a little girl of six years of age, in whom the operation, made in two sittings, occasioned, says the author, a more than ordinarily abundant hæmorrhage, but which was not sufficient to cause anxiety." The author refers to it *en passant*, and gives no details with regard to the hæmostatic measures employed, because, apparently, the hæmorrhage ceased of itself, as is usual. Dr. Richards had chiefly in view in his communication to describe the histological composition of the tumour in which the excessive development of vessels was met with referred to by Professor Politzer in the few lines which we have quoted above. This angiomatous appearance, with more or less predominance of vascular spaces, is perhaps less rare than the small number of published facts would seem to indicate; but tumours such as we are about to describe are certainly exceptional, and it is on this account that I communicate the following case:—

Case: This was a lady residing in the neighbourhood of Bordeaux, sent to me by one of my old pupils on the 19th February last, with the following note:—

"Madame L. de B., aged forty-seven, came to consult me in December, 1889, for an affection of the right ear. The hereditary antecedents presented nothing in particular, and, as regards former disease, she was very subject to hemicrania about the age of twenty-five, and always suffered from cold feet. Menses were regular but scanty, and at the present time she suffers from frequent attacks of headache and cephalalgic congestion. During those attacks she experiences in the ear, and even in the whole of the right side of the face, a sensation of tension and pulsation, and she is unable to work with her head lowered without feeling a determination of blood to it. Some months ago she felt an itching in the right ear, and tried to allay it by scratching it with a pin. This was followed by a slight discharge of pus. Then, at the commencement of December, drops of blood began to issue from the ear. On three occasions she had a regular hæmorrhage from the ear, which frequently repeated itself up to the time of her coming to consult me, when her condition was as follows:—

"15th December, 1889: Bone conduction, good; tuning-fork on the vertex, heard better in the left ear; the watch on the right ear scarcely heard on contact; on the left ear, heard at seventy centimètres. By means of the speculum there could be seen a small tumour of the size of a big pea, rounded in shape, smooth, pink in colour, with a fairly wide peduncle, and apparently growing from the postero-inferior wall of the tympanum. There were no pulsations, and the left ear was healthy.

"On the 23rd December an attempt was made to remove it by means of Wilde's snare. As I thought it was a simple polypus I was somewhat surprised to find a flattened tumour, presenting a sort of cavity, which made me suppose that I had only shaved it off, but it was impossible to examine more accurately at the time on account of the abundant hæmorrhage which ensued. This, however, was arrested by means of hot water. Three days later there was only visible the peduncle, which projected somewhat, but which under the action of alcohol installations diminished gradually, and, finally, was scarcely visible. The

watch was perfectly well heard on contact. The state of the patient was very satisfactory up till the month of July, 1894, at which time, on examining the ear, I found that the tumour had recurred. It was not, however, till January, 1895, that a fresh spontaneous hæmorrhage took place. At this period the tumour was of the size of a large elongated cherry stone. I have sent the patient to Dr. Moure, and she left for Bordeaux on the 19th February."

At the first examination I found presenting at the orifice of the meatus a dark red tumour, having the form of a grain of corn, placed on top of another smooth tumour of pinkish-grey aspect, globular in form, to which it was united, this other tumour burying itself in the meatus, and appearing to be inserted near the postero-superior wall of the tympanic cavity. From round the tumour there issued a little yellowish pus, somewhat liquid, and of a faint smell, but without actual fœtor. I proposed to extirpate the polypus, which I did the following day. After having cleaned the ear in the usual way, I passed the snare in the direction of the presumed seat of insertion of the growth, and avulsed it according to the usual plan. Scarcely had I withdrawn my instrument and the severed tumour, when a large quantity of blackish blood poured out of the meatus and ran over the patient and on to the floor. I pressed the pulp of my left thumb over the orifice, while with my right hand I prepared several pledgets of boracic wool, which I introduced with some difficulty into the deepest part of the meatus, so abundant was the hæmorrhage. I then kept up pressure with my thumb, waiting for some minutes in the hope that this hæmorrhage would either stop or at least diminish to such an extent as to allow me to see the point of insertion of the new growth. Meantime, in case the hæmorrhage should return, I prepared to plug with iodoform gauze, intending to leave it for several days undisturbed. Having made these preparations I removed my pledgets of wool, but scarcely had reached the two last ones when the hæmorrhage discharge returned with as much intensity and rapidity as ever, filling the meatus and running out in a full stream, so that I at first had the idea that I had opened into a large vessel, possibly an aneurism of the jugular vein. At once I carried out a fresh iodoform tamponment, and kept it in the meatus by means of liquid collodion, thus producing a complete and certain obturation of the auditory meatus. In the evening the patient was quite well and free from fever. Next day there was a little pain in the ear, and a slight doughiness in the temporal fossa.

On the second day the swelling increased a little, and extended more in the direction of the cheek, the ear being painful to the touch.

On the third day the cheek, and especially the temporal fossa, acquired a slightly violet tint, as if there had been a little effusion of blood into the tissues. The ear had not run; the plug had kept its place, although there was a slight tendency for it to escape from the meatus.

On the fourth day the pains were much more violent, and I determined to remove a portion of the tampon, being ready to replace it if the hæmorrhage returned. I was able to remove at least half of it without the occurrence of anything beyond a very slight hæmorrhagic oozing, of no importance.

She had a better night. The swelling of the cheek had not increased, and on the fifth day I was able to remove the whole of the tampon without any discharge of blood. On examining the ear, I found that the tumour was inserted near the postero-superior part of the tympanum, the lower region appearing free and healthy, which gave me some doubt as to a possible lesion of the jugular vein. Nevertheless, the tumor which I had removed consisted, in the entire, simply of a shell with a cavity of the calibre of a large vessel. I sent the specimen to the laboratory of pathological anatomy of the faculty at Bordeaux, where the histological examination was made by Dr. Brindel, from whom I received the following details :—

ANGIOMATOUS POLYPUS OF THE MIDDLE EAR.

Histological examination.—The fragment sent to us had the shape of a half shell, into which there could have been introduced without difficulty a small nut. After fixing in absolute alcohol it was stained *en masse* with borated carmine. It was then cut in such a way that the section was surrounded on all sides by the enveloping membrane, containing in its interior a closed cavity which was limited by the external shell. The cavity was ovular, and seen by transmitted light had a thickening of the walls at the two extremities, corresponding to the poles of the oval; one of them was the point of attachment of the shell, the other represented the very extremity—a sort of little granulation which projected from the surface of the shell.

The interior periphery, except at the part corresponding to the seat of implantation, was covered with a stratified pavement epithelium, of which the outermost cells compressed against each other were non-nucleated and lengthened parallel to the surface, forming a little irregular cord more highly stained than the subjacent cells, and in course of desquamation. In this respect they resembled the hypodermic scales of the skin. The subjacent layers were formed by cells which became little by little polygonal, and contained large round nuclei; being few in number on the walls of the oval they multiplied towards the pole which represented the free extremity, and at this spot presented a papillary formation. The most internal layer was made up of elongated cells pressed one against the other, and placed perpendicularly to the surface. Immediately below the epithelium there was a layer of connective tissue, which in some places was very thin and scarcely visible, but in others dipped into the interior of the wall, forming genuine fibrous islets.

The tissue which separates the covering epithelium from the central cavity is constituted by two different substances :

1. Irregular *elongated islets* of dense fibrous tissue taking a pink stain, and showing on its surface here and there only a few nuclei, which were much lengthened and highly stained. These islets were situated in the neighbourhood of the epithelium, particularly towards the external pole, and here and there constituted large plots in which there was a tissue differing in no respect from what we are about to describe. They did not form a homogeneous layer, because they only existed in separate points and were not always directed longitudinally.

2. A tissue which refused the stain, *connective tissue infiltrated on its surface with small red nuclei in considerable quantity, and hollowed into a number of cavities* which were neither more nor less than blood-vessels. These vessels, varying in calibre and form, had no other wall than that which was formed by the pale tissue in the middle of which they lay. It was to be noted, however, that the interior surface of the wall was neatly covered with endothelium. These

vessels were so numerous that under a high magnifying power the unstained tissue appeared to be constituted simply of their walls. In a number of places, here and there, the wall limiting the larger vessels was somewhat reddened, and oval nuclei projected in a way, the margin of the cavity being all the time on the surface of the wall. The cavity of the vessels was perfectly empty; there were no traces of blood.

We sought in vain for a wall limiting the large central cavity. The tissue appeared to be notched at the periphery of this cavity, and differed in no respect from that of the rest of the shell. At the extremity where the tumour was implanted, and which formed one of the poles of the oval, the tissue became denser, and was constituted simply of a fibrous tissue, of which the layers had a longitudinal direction parallel to the long axis of the fragment, and analogous in staining to the islets disseminated through the rest of the shell.

The growth was, *en résumé*, an angiomatous polypus, with fibrous portions.

The histological examination was therefore very conclusive, and enabled us to lay aside the idea of a wound of the jugular, as one might have thought at first, on account of the abundance of the hæmorrhage produced by the surgical intervention. We know, at the same time, that though there may not be cases of aneurism of this vessel of such a size as to project from the orifice of the external meatus, there are some sufficiently large to fill the tympanum, and to give rise to accidents at the moment when the membrane is perforated. Everybody knows, in fact, the cases of Ludwig,¹ and of Hildebrandt,² without referring to the more recent ones narrated and discussed at the meeting of the Austrian Society of Otology a few months ago. Be this as it may, the case I now narrate is sufficiently different from those that we observe in ordinary practice to deserve being communicated to you, if it were only to lead to the publication of analogous cases, if any of you have met with such in the exercise of our speciality.

Dundas Grant (Trans.).

THE SENSITIVENESS OF DEAF MUTES AND THEIR LEGAL STATUS.

Prof. S. OTTOLENGHI (Siena).

Read before the Fifth International Congress of Otolology, Florence, 1895.

I HAVE examined the reactions for general and painful sensations in forty-four deaf mutes with the Faradimeter of Edelmann, and I have examined the retinal sensitiveness (field of vision) with the instrument of Landolt, to see if in either case there were any marks of degeneration. My conclusions are as follows:—The reactions to general sensitiveness and to pain, in the deaf mute, are very little inferior to the normal. In early life, indeed, there is no difference worthy of note. So also with regard in general to the field of vision; it is normal both in extent and form, except for a readiness to fatigue, which by itself is anything but a serious

¹ "Archiv für Ohrenheilk," Vol. XXIX., Part 3, 1890.

² "Archiv für Ohrenheilk," Vol. XXX., Part 3, 1890.

sign of marked degeneration. The sensitiveness of the deaf mute evidently expresses a mental development of a very satisfactory quality, and clearly differentiates him from such classes as the criminals, the epileptics, and the feeble minded (partial imbeciles), not to mention more marked forms of degeneration. In spite of the absence of one sense, the sensitive zone of the deaf mute is not deficient. Various stimuli from all the sources in the sensorium reach his cortex, and this is in such condition as to be able to normally elaborate the stimuli; hence comes ease of perception and attention. All the other sensorial sources, if exercised, can supply the want of a source so full of ideas as is that of hearing, when the centre is normal. This fact should help our judgment in forming the scientific diagnosis of the deaf mute. It has been known to the teachers of the deaf and dumb for some time, and repeatedly taught by them; but biologists, and still less legislators, so far, have failed to bear it in mind. Deaf-mutism, by itself, does not mean serious degeneration. It is true that it may be a complication of grave forms of degeneration (imbecility, cretinism); but then the degeneration is not settled from the deaf-mutism by itself, but from the arrest or deviation of development produced by the mental deficiency to which it is united.

Just as we do not call a person a cretin because he has atrophy of the thyroid gland so we do not consider a deaf mute an imbecile because some imbeciles are affected with deaf-mutism. Probably, the great mistakes which have been made with regard to deaf mutes originated from having confused idiots with deaf-mutism, *i.e.*, with true, genuine deaf mutes. In idiocy (imbeciles, cretins) education can do very little; they are born poor in spirit, and so they are destined to remain. The deaf mutes, on the contrary, are individuals who are deficient in that sense which is the best for putting them *en rapport* with society. Hence they appear unsocial, while they are not that at all. They have all the dispositions of civilized man. If left uneducated they will be deficient, because they cannot utilize the advantages of social existence. If educated—*i.e.*, if their faculties are exercised—the latter develop, and not only does the effect of the forced arrest of development to a great extent disappear, but their mental condition reaches a degree little inferior to normal. Education and instruction cannot manufacture intelligence, but they allow the psychical faculties to show themselves, and by being exercised to grow in strength.

In view of these facts, what shall we say when we think that, of the fifteen thousand deaf mutes in Italy, only about fifteen hundred benefit by instruction? What shall we say of the civil and penal codes which treat deaf mutes as inferiors, worse than idiots? I say worse, because for the latter at least is reserved the decision of the judge as to their civil and penal capacity when any special circumstance occurs. Deaf mutes, on the contrary, are, as a general rule, at once set down for all their lives as so much inferior that from a civil point of view they are thought to be always in need of guardianship, and as to their penal responsibility they are treated as children, even when they have reached adult life.

From my studies I feel justified in drawing the following conclusions :

1. The deaf mute, as a rule, is endowed with organic and mental sensitiveness little inferior to the normal ; often it is quite normal.

2. It is both just and necessary to reinstate him in civil life and in his penal responsibility.

3. As it has been demonstrated that the sensitiveness of the deaf mute varies very little from the normal, and as it is known how great an influence the senses have on mental development in all systems of education, we ought to give much attention to "gymnastics" of the senses, not only for the purpose of instruction by the oral method, but because they are one of the most efficacious methods for promoting psychical development.

4. Bearing in mind the individual varieties in sensitiveness in deaf mutes, it is useful to divide them into different categories for purposes of instruction, in this way assisting the teacher, and rendering the instruction more advantageous to the pupil.

5. In view of the conditions of the principal organs of sensation in deaf mutes, we have a greater obligation to see that they enjoy an education which develops the faculties given them by nature.

6. Both for medico-legal and educational purposes it is useful, and in some cases indispensable, to examine the condition of sensitiveness of a deaf mute, in order to determine his mental condition.

St. Clair Thomson.

ON THE PARACUSIS OF WILLIS.

By Dr. D'AGUANNO (Palermo).

Read before the Fifth International Otological Congress at Florence.

Dr. D'AGUANNO referred to the various theories with regard to the causation of the paracusis of Willis. According to some authors, it arises from chronic lesions of the middle ear ; according to others, from a peculiar torpor of the auditory nerve ; while others again associate the torpor of the nerve with the lesions of the middle ear, thinking that in this way the question can be answered. Among the former, Von Tröltsch, while allowing that the majority of deaf patients hear better in the middle of noises, because one is obliged to speak to them in a louder voice than usual in a quiet room, cannot at the same time deny certain observations with regard to deafness which is truly "paradoxical," in which loud noises form the *conditio sine quâ non* for hearing ; and he explains these cases by a slight looseness of the joints of the chain.

Prof. Politzer, who determined that in these cases the amelioration was real because his aconimeter was heard better in the midst of noise, thinks that we have to deal with a rigidity of the chain of bones, which the loud noises succeed in shaking, and thus produce a better hearing power. Meanwhile, if the hypothesis of Tröltsch has not yet been demonstrated, that of Prof. Politzer is also very difficult to conceive. If we admit, in fact, that this paradoxical deafness is the consequence of a

rigidity of the bones (and not, indeed, of a complete ankylosis, because in these cases all sonorous vibration is useless), we ought to meet with it in all commencing cases of true or false ankylosis as an epiphenomenon of true and complete deafness, and not as an isolated fact, independent of the degree and of the form of the otitic affection. If, then, such an anomaly is present in certain cases, it ought, without doubt, to be related to another cause, or at least some other factor ought to intervene. St. John Roosa is doubtful in this respect. According to him, the paradoxical deafness ought always to be the consequence of a chronic non-purulent lesion of the tympanum the cause of which is to be sought for in a modification of the chain of ossicles; but Müller and his partisans, on the contrary, attribute it to a torpor of the auditory nerve. The improvement of hearing in Urbantschitsch's case appears to have lasted for twenty-four hours after a railway journey. I do not deny that sometimes this form of deafness is the result of a torpor of the organ of perception, more particularly in the hysterical cases, and I admit that the nerve might acquire its functions under the stimulus of a powerful and continuous sonorous excitation, such as the noise of a vehicle or of a railway carriage; however, we cannot elevate such an opinion to the dignity of a law, for the functional and objective examination of the auditory organ does not always speak in favour of such a torpor, and in this sense the following personal observation is striking.

B. R., aged thirty-four, a spirit merchant at Palermo, for the last four years, without any probable cause, had suffered from gradual and progressive diminution of hearing power, accompanied with subjective noises in both ears. The patient came to consult me rather on account of his deafness, which often prevented him from looking after his business. He drew my attention to the fact that his hearing was much better in the midst of external noises, so much so that his deafness varied directly with the degree of silence, and inversely with the amount of noise. At night, for instance, it was much more marked than in the day, and in a carriage it was less than when he walked about. Functional examination showed that whispered voice was not heard at all on either side; ordinary conversation at twenty centimètres, loud voice at forty centimètres. Politzer's acoumeter was scarcely heard opposite the meatus, but very markedly, on the other hand, on the mastoid process. The tuning fork on the vortex was not lateralized. Rinne's was negative; Galton's whistle was heard up to the line 0.8 quite close to the ear. On the piano he did not hear the last octave. A point worthy of mention was that he heard ordinary voices quite well when spoken to him in front of a piece of paste-board, which he held between the teeth. As regards the previous history, there was no hereditary taint. He had never had syphilis nor any other disease bearing upon the ear. He had never drunk spirits to excess, but used tobacco very freely. Examination of the tympanic membranes showed them to be slightly opaque. The light cone was a little shortened, the short process projected, and there was very little mobility during Valsalva's inflation. Catheterism brought about very slight improvement on the right side (acoumeter heard at one centimètre) and no improvement on the left. Examination of the neighbouring

organs revealed hypertrophy of the nasal mucous membrane, and a fair amount of chronic granular pharyngitis, which appeared to be the direct cause of the chronic lesion of the tympanum.

In this case, as is evident, the paracusis cannot be explained by Müller's and by Urbantschitsch's hypotheses, because the functional examination, and the evidence of the paste-board (audiphone), indicated the integrity of the auditory nerve: the lesion was evidently situated in the tympanum. Paracusis cannot, therefore, be always attributed to torpor of the nerve in view of such clinical facts. Similarly, Gellé's view seems insufficient, attributing as he does the paracusis to a "dynamogenic" action affected by noise. One would wish to know why the majority of deaf patients are not "dynamogenised." The same remark applies to another opinion of Gellé, who, admitting as a fact that often the subjective noise is the only cause of the defect of hearing, thinks that external sounds, by masking these, diminish the deafness.

Ménière, in his recent manual of clinical otology, takes up an eclectic position as regards this question. According to him, it depends upon an affection of the tympanum and on a torpor of the nerve. Nevertheless, this hypothesis does not seem to me satisfactory, either because we see pretty frequently that in the majority of cases there is a lesion of the tympanum without torpor of the nerve, while, on the other hand, when there is torpor we do find tympanic lesions, because in a number of cases of torpor of the acoustic nerve from inaction of the ossicular chain, and more precisely from ankylosis of the stapes, we meet with complete non-paradoxical deafness. If we admit, then, that this form of deafness occurs without torpor of the nerve, but with simple lesion of the tympanum, we must look for the cause in the condition of the contents in this category. Direct otoscopy revealed in our case chronic catarrh of the middle ear, with diminished mobility of the tympanic membrane, which would indicate rigidity of the ossicular chain. Meanwhile, this does not suffice to explain to us the paracusis, and, until *post-mortem* examination solves the question completely, I am inclined to believe in a dissociation of the chain according to the opinion of Tröltzsch, or a loosening of the ligament of the ossicles, or some peculiar change or degeneration in the tympanic muscles, whose action is not yet quite known, and which loud noises only can excite, at the same time improving the hearing. The infrequency of these facts could alone explain to us the infrequent occurrence of paracusis.

Conclusions: First—Paradoxical deafness (paracusis of Willis) is a phenomenon symptomatic either of torpor of the auditory nerve or of a lesion of the tympanum. Second—The tympanic affection which gives rise to it might be related either to an interruption of the joints of the chain, or to a relaxation of the ossicular ligaments, or to a degeneration of the intra-tympanic muscles; but up to the present we are not in possession of any certain proofs.

Dundas Grant (Trans.).

SOCIETIES' MEETINGS.

PROCEEDINGS OF THE LARYNGOLOGICAL SOCIETY OF LONDON.

Meeting, November 13th, 1895.

FELIX SEMON, M.D., F.R.C.P., *President, in the Chair.*

A Microscopical Section of Myxoma of Larynx. Shown by the PRESIDENT.

The section, which includes the entire tumour, consists throughout of an open meshwork of delicate fibrille, in which lie moderate numbers of multiform cells, furnished with delicate processes which construct the reticulum mentioned.

The growth is moderately vascular, and is covered with normal stratified squamous epithelium.

Case of Paralysis of Left Vocal Cord. Shown by Dr. J. B. BALL.

A. N., aged thirty-six, a clerk, came to the West London Hospital on the 7th September last complaining of weakness of voice and hoarseness, which had lasted for six weeks. He attributed his symptoms to having over-exerted his voice during the Hammersmith election, a few days after which the voice trouble began. The left vocal cord was found fixed in the position of complete paralysis, and has so remained. He had syphilis eight years ago. No other illness of importance. No cause, intra-thoracic or otherwise, can be found for the laryngeal condition. He took ten-grain doses of iodide of potassium for the four weeks following his first attendance at the hospital.

Dr. DE HAVILLAND HALL mentioned a case of complete paralysis of the left vocal cord in which the paralysis preceded the signs of aneurism by about twelve months; at the *post-mortem*, some eighteen months later, an aneurism of the transverse part of the arch of the aorta was found. He also mentioned a case he had seen with the President, in which physical signs of aneurism were very imperfectly marked for some months, but they afterwards became distinct. He suggested that the case in question was possibly due to aneurismal pressure.

Dr. BRONNER suggested that the paralysis might be of central origin. It was frequently so in the case of the eye: why should it not be so in these cases?

The PRESIDENT said it was possible the paralysis was of central origin. It was impossible to find out the cause of these cases in five minutes. The more they were seen the more inexplicable they were. It was very desirable to keep them under observation, and not to neglect

the *post-mortem*. *Tabes* should be borne in mind, and the reflexes always examined.

Dr. BALL, in reply, stated that the reflexes in this case were normal.

A Case of Neurosis of the Larynx due to Laryngitis complicating Typhoid Fever. Shown by Mr. BOWLBY.

The patient, a lad aged eighteen, was admitted to St. Bartholomew's Hospital, under the care of Dr. Hensley, on August 27th, 1894. He suffered from typhoid fever without complication until September 1st, when he began to be deaf, and by September 11th had completely lost his hearing. On September 30th, when the fever had nearly subsided, he began to be hoarse, and on October 2nd had symptoms of laryngitis. On October 3rd, as he was suffering from severe dyspnoea, Mr. Bowlby was asked to see him. There was great swelling of the whole larynx, especially of the arytenoid cartilages and the ventricular bands, and slight ulceration of the posterior attachment of the left cord. Neither cord moved at all freely, the left being almost fixed. The opening of the glottis was very narrow. There was much stridor, the patient was cyanosed, and recession was marked. Tracheotomy was at once performed, with immediate relief.

On October 9th there was great swelling of the arytenoid region, simulating that of tubercle.

November 5th.—Left arytenoid flattened, but general swelling less and no ulceration. Cords very fixed, especially left.

18th.—Tube removed for a few hours, but had to be replaced.

December 11th.—Can breathe through larynx for some time with tube plugged.

January 4th.—No further improvement. Left cord fixed. No sign of present inflammation. A good deal of subglottic thickening.

In February and March, 1895, repeated attempts were made to dilate the larynx. After it the patient could do without the tube for a few hours; he could not, however, continue to breathe without it. His voice was nearly restored, being only a little hoarse. From February to the present time there has been no material change. There is now general thickening of the whole larynx at the subglottic region; the left cord is practically fixed, and the right moves imperfectly. The patient is very anxious for any operation that will enable him to dispense with his tracheotomy tube, and it is suggested that the left cord and adjacent mucous membrane and scar tissue might be excised with advantage.

Dr. SCANES SPICER stated that he had brought a similar case before the Society a year ago. It was then suggested that dilatation should be tried with Whistler's dilator and Schrötter's tubes. It was found impossible to use the latter. The larynx was opened and some mucous membrane removed. An intubation tube was inserted, but as soon as it was removed dyspnoea occurred, and the patient had to go back to the tracheotomy tube again.

Dr. DUNDAS GRANT had a similar case, in which intubation did no good.

Mr. C. SYMONDS referred to the case he showed at the last meeting

of the Society, in which the results of removal of the cord and soft tissues adjacent were shown.

The PRESIDENT remarked that, in a case in which he had been consulted, thyrotomy had been performed against his wish, as he felt sure the voice would become worse; the results, however, had been very good. He stated that it was astonishing the amount of voice retained in these cases where the cord and adjacent soft tissues were removed.

Mr. BOWLBY, in reply, stated that he would put the risks with regard to the loss of voice before the boy, and leave it to him to say whether he would have the operation performed or not.

Case for Diagnosis. Shown by Mr. BOWLBY.

This patient had a swelling externally on the left side of the middle line, and there was a blackish-looking mass in the larynx.

Mr. BUTLIN thought the external swelling was either a high thyroid cyst or a low hyoid one. The internal mass looked suspicious, but he should be inclined to try the effects of mopping well with a brush, as it might be hardened mucus.

The PRESIDENT thought it was most likely mucus, and related a case that he had seen at Golden Square many years ago, which he had thought was an angioma, but which had turned out to be hardened mucus.

Microscopic Specimen of Hemorrhagic Myxoma of Lingual Tonsil (in Albuminuric Patient). Shown by Dr. A. BRONNER.

The specimen was from a woman, aged thirty-five. For eight days had difficulty in swallowing, with expectoration of blood. There was a large tumour, about the size of a walnut, on the right side of the lingual tonsil, which came away spontaneously in three days. There was a thick capsule with concentric layers of red tissue. There is now the stump, with small branches, to be seen on the right side of the lingual tonsil.

Dr. PEGLER said he thought the growth consisted of adenoid, lymphoid, and fibrous tissue; could not distinguish any myxomatous tissue.

A Case showing Regeneration of Tissue along Inferior Crest after Turbinectomy. Shown by Dr. WILLIAM HILL.

This was the case of a female, aged twenty-one, whose left inferior turbinal he had completely removed six months previously for the relief of marked obstruction in association with a narrow choana. After the operation granulations sprang up along the inferior turbinal crest; these organised, and the left nostril now presented a regeneration of tissue which in appearance simulated a fair-sized, soft, inferior turbinal body. The result was at present excellent, and did not bear out the fears that had been expressed in some quarters that turbinectomy would lead to atrophic changes in the nose.

Dr. PEGLER said the regrowth appeared to him to consist of a movable body, which on being pushed back with a probe nearly touched the septum, and constituted a source of obstruction to free nasal respiration on that side. He did not distinguish any regeneration of

turbinal erectile tissue in front of or behind it. The portion of growth he referred to was, he thought, distinctly œdematous, and if Dr. Hill decided to snare it off he should be glad to know the result of the microscopic examination.

In reply to Dr. Pegler, Dr. HILL did not think the appearance of the regenerated tissue in any way suggested a localised œdema. He was inclined to expect that the granulation tissue had become organised into gland tissue covered by mucous membrane, and it was just possible that vascular tissue might also have been regenerated.

The following pathological specimens were shown by Dr. A. A. KANTHACK :

1. *Typhoid Ulcer of Larynx.*

There is a large ulcer just below the left processus vocalis. There was also perichondritis. A probe passes easily down as far as the upper margin of the cricoid cartilage.

Dr. WILLIAM HILL said that the ulceration seemed to be just where the cartilages of Wrisberg are in the vocal cords. It was possible that this was the cause of the ulceration here.

2. *Diffuse Papillomatous Hypertrophy of the Laryngeal Mucosa.*

This specimen somewhat resembles the one exhibited at the last meeting. The child from whom it has been removed died suddenly of asphyxia. Looking into the aditus laryngis from above, we see that it is completely blocked by a dense papillomatous growth which filled up the whole of the larynx. The posterior wall of the trachea and a portion of the cricoid plate have been removed, so as to allow of a glance into the larynx from below. We find that the growth extends not only below the cords as far as the lower border of the cricoid, but even lower down, just below the tracheotomy wound (tracheotomy being done too late to save the child), a few small warty growths can be seen.

On microscopic examination the tracheal growths are distinctly papillomatous, and lined by a thick layer of a squamous epithelium. The epithelium at either side of the warts is of the stratified columnar type, heaped up in many layers, and in fact in the transition or metaplastic condition, from the single columnar layer through the stratified columnar type to the squamous or epidermal type. In the sinuses which we find between the papillary outgrowths of the tracheal mucosa, the epithelium, though several layers deep, is typically columnar.

A microscopical specimen of the tracheal wart was shown under the microscope.

3. *Empyema of the Maxillary Antrum.*

The specimen was removed from the body in the condition in which it is now. The bicuspids have disappeared (through caries and removal probably); the anterior plate of the alveolar process is thinned and in part destroyed. A glass rod is passed up through the opening in the alveolus into the antrum, there being therefore a direct communication between the antrum and the cavity of the mouth.

The lining of the antrum is much thickened, especially below and posteriorly, where a thick polypoid mass projects into the dilated cavi

of the antrum. Through the deficiency in the anterior alveolar plate, the inflammatory material must have found a ready exit into the subcutaneous tissue of the cheek.

Dr. SCANES SPICER remarked that a very large opening would have been necessary in this case to remove thoroughly the growths.

Case of Pachydermia of the Interarytenoid Fold. Shown by Dr. PERCY KIDD.

The patient, Elvina P., aged thirty-three, has suffered from hoarseness for seven or eight years.

On examination the interarytenoid fold shows marked swelling of a greyish pink colour. The prominence is irregularly divided into two parts, that on the left side being the larger. The vocal cords are both somewhat thickened, and the movements of the right are distinctly impaired. When the patient was first seen, five or six months ago, the interarytenoid fold presented two symmetrical plate-like prominences separated by an indistinct furrow, but this appearance is now less marked. There is no evidence of syphilis or any other disease.

The treatment has consisted in the exhibition of iodide of potassium, the local application of Mandl's solution of iodine, and the use of lactic acid: 1 to 2 per cent. solution, in a Siegle's steam spray apparatus. The spray was suggested by Prof. Moritz Schmidt, who saw the patient at Brompton last July.

On the whole the swelling has slightly diminished, but the voice remains unaltered.

Mr. BUTLIN thought the case might be one of tubercle, from the situation and oedema. He should take a portion off for microscopical examination; suggested the application of the galvano-cautery.

Dr. BRONNER had a case he treated with the galvano-cautery; this had made the patient worse. He then removed a portion with forceps. There was, after this, some slight improvement.

Mr. C. SYMONDS thought it was a tubercle, as there was so much hoarseness; he would suggest treatment by the curette and lactic acid.

Dr. TILLEY remarked that he had shown a case about six months previously with exactly the same appearance. The pain caused was, he thought, due to the fissure. His case had lactic acid applied twice a week, which made no difference. He removed a portion with the curette, and the voice at once improved. He thought the throat had got better since the patient had given up alcohol.

The PRESIDENT remarked that these cases were first noticed to occur exclusively in drinkers, when Hünnermann wrote an inaugural thesis on the disease at Virchow's request.

Dr. SCANES SPICER looked upon them as cases of ordinary inflammatory thickening; the tonsils and upper part of the throat were also thickened.

Dr. DUNDAS GRANT inquired whether the electrolytic treatment had been tried.

Dr. KIDD, in reply, said he did not think the case was one of tubercle. He would try and remove a portion with the curette. Although there

was no distinct history of alcoholism, the patient had been a barmaid. He thought these cases were localized overgrowth of tissue.

Pathological Specimen of Syphilitic Ulceration of the Trachea with Cicatricial Stenosis of both Main Bronchi. Shown by Dr. PERCY KIDD.

The specimen shows diffuse ulceration and thickening of the mucous membrane of the trachea, the ulceration being more recent in the upper third, with some whitish cicatrices toward the lower end. No definite stricture of trachea.

Ulceration extends into both main bronchi, which are slightly stenosed from cicatricial contraction.

In the left lung there are circumscribed areas of fibrosis, one small gummatous nodule, and two small cavities, probably due to softened gummata.

The soft palate and pharynx were also scarred, and a cicatrix was found on the penis.

No trace of tuberculosis could be discovered in any organ.

Case of Lupus of the Pharynx and Larynx. Shown by Dr. E. LAW.

Patient, G. E., aged ten, came to the London Throat Hospital in September on account of "something in the throat." Twice had chicken-pox, once measles; scarlet fever two years ago, and has never been well since. Seven months ago the mother first noticed the frequent efforts of the child to clear the throat. Breathing was occasionally troublesome at night. At no time was there pain or difficulty in swallowing. Patient is the seventh of eight children; the eighth died of "consumption of the bowels." One sister has been to Ventnor with a bad cough, and has suffered from lupus on the back of the hand for five years. There was much infiltration of the soft palate and pillars of the fauces, with cicatricial patches on the velum and right posterior pillar. Epiglottis was greatly thickened and nodular; the tip destroyed by ulceration. Aryepiglottic folds and ventricular bands were œdematous and swollen. The cervical glands are enlarged, and granulations are present in the left ear. Dr. Law saw the patient for the first time ten days ago, and was informed that she had gained in weight and the local trouble had improved whilst taking powders of hyd. cum. cret. and syrup of the iodide of iron. No local treatment has as yet been employed, but he should scrape and apply lactic acid, with the internal administration of arsenic.

Case of Nasal Obstruction from Septal Deflection and other Causes. Shown by Dr. E. LAW.

Patient, aged seventeen, consulted Dr. E. Law on August 14th for a stoppage in the nose, a discharge from the left nostril, a desire to hawk in the morning, slight deformity, headache, sickness, liability to colds with loss of smell and taste. Examination showed extensive deflection of septum to left, with a ridge-like projection at the base; bony enlargement of right middle turbinate pressing against concave surface of the septum. Large clusters of adenoid growths, polypoid hypertrophies of the posterior extremities of the turbinate bodies blocking up the choana;

a large accumulation of mucus; very anæmic. Iron and arsenic were given and the adenoids removed. The secretions diminished, and for a time patient was slightly relieved. At the present time there is great discomfort and inconvenience from nasal obstruction. The opinion of the members is requested as to the most suitable operative procedure.

Dr. TILLEY recommended that the anterior nasal spur on the left side should be removed, then the posterior end of the turbinate on that side. He suggested the use of Jones's turbinotome, a modification of which he had had made by Hawksley.

Dr. DUNDAS GRANT also suggested the use of the turbinotome.

Dr. HILL said that when it was desired to remove only the posterior extremity of the inferior turbinal, but not the whole body, he had found it useful to detach the posterior extremity of the turbinal from the turbinal crest for half an inch or more with Carmalt Jones's turbinotome, and then remove the portion desired by a snare, which was readily inserted and retained in the groove thus made.

Dr. LAW, in reply, stated that he should feel inclined to try and remove the hypertrophied tissue from the choana and the anterior extremity of the right turbinate before interfering with the septum. If such treatment did not relieve the obstruction, he would then remove the spur.

A Warty Growth of Suspicious Nature on Left Vocal Cord in a Man aged Fifty-four. Shown by Dr. SCANES SPICER.

Patient has had hoarseness for two years.

On examination the left vocal cord is injected, projects slightly, and lags a little in movements; at centre of ligamentous portion is a dusky, purplish, well-defined, spherical, sessile nodule; no ulceration to be seen. There is no difficulty of swallowing or breathing; no pain; no loss of weight, no history of syphilis, no enlarged glands externally. The age of the patient, the lagging of the cord, and the injection surrounding the growth suggest the possibility of malignancy, against which the long duration of hoarseness *in statu quo* militates. The patient had been taking pot. iod. gr. xv. t. d. s. for a fortnight. Opinions were invited.

Dr. PERCY KIDD thought the case one of angioma, and would attempt removal.

The PRESIDENT and Mr. BUTLIN both recommended an attempt at endo-laryngeal and microscopical examination before splitting larynx. They regarded growth as suspicious, but more probably it was recurrent.

The PRESIDENT also said that some time ago he had a patient, aged sixty-three, on whom he performed thyrotomy; the right vocal cord was removed. Recurrence occurred as a red round growth without infiltration at the anterior commissure. Examination after removal showed this to be a granuloma.

Case of Malignant Disease of the Œsophagus in a Girl aged Twenty-three. Shown by Mr. W. R. H. STEWART.

E. H., aged twenty-three, servant, came to the London Throat Hospital on September 11th complaining of difficulty in swallowing

solids. Three months previously she began to feel soreness in the throat, especially on swallowing. This increased so that deglutition became quite painful, chiefly in respect to solids, though at times she could not get down liquids. Father died of "consumption;" one brother and two sisters died young, cause unknown. Has two brothers and two sisters alive and in good health. No history of syphilis obtainable.

Examination.—On the wall of œsophagus is an ulcerating swelling. On digital examination a firm mass can be felt, which bleeds readily. Both arytenoids are swollen and reddened. Had hæmorrhage from throat during the night of October 21st. Secretions removed from growth, and examined by Mr. Waggett, showed no tubercle bacilli. Patient has been on pot. iodid. gr. xv. three times a day without improvement. She has also had arsenic. Mr. Stewart had no doubt about the diagnosis, notwithstanding the age of the patient, more especially as it is exactly like a case he had about a year ago in a young woman aged twenty-nine, the specimen from which case he showed the Society.

Mr. BUTLIN said there was no doubt about the diagnosis; he had recently a case in a girl aged twenty-four.

Case of Enlargement of Thyroid Gland in a Boy which almost blocked the Lumen of the Pharynx. Shown by Mr. STARR.

A Case for Diagnosis—Tubercle or Cancer. Shown by Dr. CLIFFORD BEALE.

The patient, a sailor, aged forty-seven, had suffered for about two years from chronic tubercular infiltration of the apex of one lung, and for about four months from a steadily increasing loss of voice. The disease in the lung had never been very active, nor had there been any marked emaciation. The voice was not entirely lost, but was generally reduced to a hoarse whisper if the patient attempted to use the voice much. On examination the left side of the larynx was seen to be affected. The left ventricular band was swelled, and just below it was an angry-looking fleshy prominence which seemed to project from the ventricle, partly concealing the cord below, which appeared to be irregularly thickened. When first seen the left side of the larynx hardly moved at all on attempted phonation, and by palpation externally a small enlarged gland could be felt. Under observation, but with no local treatment, these conditions improved considerably in the course of three weeks. The movement of the left side became free, although not so good as that of the opposite side. The enlarged gland could no longer be felt, and the internal swelling, although not much altered in size, was much less angry in appearance. This improvement, which took place *pari passu* with a similar improvement in the lung, suggested that the infiltration in both organs was probably tubercular.

Mr. BUTLIN was not sure of the diagnosis: would suggest closely watching the case.

The PRESIDENT said the movements of the cord were not quite free. He suggested malignant disease, but would try the effect of iodide of potassium.

Dr. HALL had a similar case, which was undoubtedly tubercular.

A Case of Swelling of the Submaxillary Gland (due to a Salivary Calculus). Shown by Dr. DUNDAS GRANT.

A. S. P., aged fifteen, complained of a lump in the throat, namely, in the right submaxillary region. A small swelling had been present for about twelve months, but within the last two weeks it had got much larger. When first seen there was a considerable swelling, slightly lobulated, corresponding in shape and position to the submaxillary salivary gland, and it was found that it increased considerably in size during eating and subsided afterwards. There was considerable redness and swelling in the neighbourhood of the orifice of Wharton's duct, which was covered with a whitish exudation, and was extremely tender. The duct felt harder than normal to the touch. It appeared that for about three months there had been a swelling under the tongue, from which there occasionally issued a little matter having a saltish taste. No calculus was detected. Small doses of calomel and a mouth-wash of chlorate of potash were prescribed.

On the 13th November the glandular swelling was much less, the duct less swollen; there was a fistular orifice of the size of an ordinary pin-head opening into the duct in the hollow between it and the tongue, about three-eighths of an inch to the right of the frænum. On closer inquiry it was elicited that a few days previously, while the patient was gargling, two small "stones" emerged, which were thrown away.

Mr. SPENCER had a similar case under him, in which he could find no calculi when the duct was slit up; he then scraped out the gland, but this did not improve. So he had to excise the gland, which on examination showed calculoid disease.

VIENNA LARYNGOLOGICAL SOCIETY.

Meeting, May 2nd, 1895.

President—Prof. STÖRK.

THE TREATMENT OF SINUSITES.

WEIL presented a woman, fifty-five years of age, who had suffered seven and a half years ago from a chill, with repeated rigors, violent frontal and occipital pains, nasal obstruction, and tumefaction of the root of the nose, forehead, and temples. At the end of fourteen days the headache ceased, and fœtid nasal suppuration appeared, which lasted for six years; then nasal obstruction reappeared, and last summer it was necessary to extract a number of mucous polypi from both nostrils. At the first examination, 4th December, 1894, Weil found great suppuration, extensive polypoid productions, and in both middle meatuses and in the left olfactory cleft a large surface of denuded bone. He diagnosed ethmoidal suppuration with necrosis, and at several sittings removed the greater

part of both middle turbinateds and opened the ethmoidal cells, which were quite filled with pus.

The secretion rapidly diminished—remaining, however, profuse—and there was produced a suppurative median otitis of the right side, accompanied with perforation of the tympanic membrane, which was totally cured, almost without medical treatment, by boracic acid. There gradually appeared a unilateral suppuration of all the sinuses, which was treated by injection of a solution of nitrate of silver (six to twelve per cent.). Her condition is very much improved. The ethmoidal cells are now quite free, divided by septa, the same as the openings of the sphenoidal cavity. The frontal and maxillary sinuses can be easily sounded and irrigated.

Weil maintained that if he had followed the indications formulated by Hajek and others—that is, to treat first the maxillary sinuses, then the frontal, and lastly the ethmoidal cells—the cure would have been delayed much longer, and would have been more difficult, while after ablation of the middle turbinateds he had sufficient space to operate.

STÖRK observed that we should not push operative treatment of suppuration of the sinuses too far, and that we ought only to operate when this seems indispensable for the relief of great suffering, for the results obtained up to now are not brilliant. It is not sufficient to recognize with a probe the presence of bare bone to justify the immediate removal of an important osseous fragment of the nose, since we are exposed to errors frequently by reason of the extraordinary thinness of the mucous membrane.

WEIL replied that, on the contrary, he limits operation to strict necessity, and allows intervals of from ten to fourteen days between the sittings; while, after the success which he has obtained in other cases, he cures all the other sinusites, without any other operation, by simple pulverizations through the natural openings. He believes that the majority of sinus suppurations are cured spontaneously when a regular outlet for the pus is assured through natural or artificial openings, and he pronounces himself against the opinion generally held latterly of radical operation, and against the early use of the curette, exposing the patient to danger before having made a satisfactory attempt at treatment by simple means. He thinks that the results of radical treatment are not very striking, and intends soon to publish a comparative study of all methods of treatment employed up to now and their results.

CHIARI related briefly his experience:—

1. *Maxillary Sinus*.—In about a hundred cases the antrum of Highmore was filled with muco-pus. From August, 1893, to May, 1895, he had treated at the polyclinic nearly forty cases of empyema. In all these cases the purulent collection in the cavity was recognized by perforation and exploratory washing. He could speak more in detail of fifty-eight cases of empyema. Nine times there existed in the alveolar process a fissure leading to the cavity. Rhinoscopic examination gives such certain diagnostic results that he has only fourteen times had recourse to exploratory puncture through the inferior meatus and irrigation to ensure a diagnosis. Irrigation of the maxillary sinus has rarely succeeded with

him, and he has only in three cases obtained in this way the evacuation of an important purulent mass. He regards it as being but little satisfactory, and necessitating special aptitude. In one case he failed to irrigate through the inferior meatus by a large opening, which is very difficult to practise, and impossible for the patient himself. He has perforated the alveolus eighteen times through the second pre-molar, fifteen times through the alveolus of the first molar, five times through the first pre-molar, and four times through the second molar. He has only three times entered the antrum through the canine fossa. Twelve patients of the fifty-eight have only been observed a few days, and he cannot say any more of them. Twenty-seven have been completely cured in from one to two weeks (sixteen) to four months; the rest have been obliged to attend several months—even two years—and others have been only more or less improved.

In the former cases the treatment consisted only of injections. In order to avoid artificial obstruction of the alveolar fistula, he retracted it so as to prevent the introduction of food from the mouth into the antrum. Later on he made a permanent fistula three to four millimètres in diameter from the alveolus into the antrum, irrigating and introducing iodoform gauze strips seventy centimètres long and two centimètres broad, which prevented decomposition and remained in the cavity eight to fifteen days. Fœtidity was prevented and secretion sensibly diminished. Lastly, the fistula was closed with iodoform gauze, and when suppuration ceased (determined by exploratory puncture) the fistula was kept closed for some time by a thin, hard caoutchouc canula, applied against the gum. By shortening and diminishing the size of the canula he finally obtained closure of the fistula in its upper part. This method gave him the best and most rapid results. If cure was delayed too long, he curetted the mucous membrane of the antrum through the alveolar opening, again tamponning. He has never practised complete curetting of the mucous membrane in its whole extent, never having met with patients who would consent to it. The three cases in which he perforated the antrum by large openings through the canine fossa were curetted, and twice he obtained complete cure by tampons of iodoform gauze. In one case there was merely improvement. The operation through the canine fossa was always followed by great swelling of the cheek, and irrigations through the fistula in the canine fossa and tamponning have always been much more painful than through the alveolar fistula. The latter, having a diameter of from three to four millimètres, allows sufficient space for the introduction into the antrum of a small curette; for this reason he confines himself nearly always to the alveolar opening. As to results, he would say that only those patients could be regarded as cured who had no more nasal discharge after the cessation of irrigation; but even those who were only improved derived benefit by the irrigations practised from time to time, which rid them of pain and fœtidity.

2. *Frontal Sinuses.*—These sinuses are frequently affected in the course of acute nasal catarrhs, and most cases are cured when the catarrh disappears, because their excretory channel is situated behind. At the Society of Medicine, November 3rd, 1894, he had already drawn attention

to this fact, and related numerous prolonged suppurations of the frontal sinuses or catarrhs accompanied with violent pains. The treatment consisted of irrigations through a thin canula introduced into the excretory duct of the frontal sinus, with or without removal of the anterior end of the middle turbinate. He had cured by one single injection two cases of acute catarrh of the frontal sinus accompanied with severe frontal headache, and one case of chronic mucous retention. In many cases, although the prolonged cephalalgia had been checked by frequent irrigation, the suppuration was not stopped. Two cases of chronic suppurative catarrh of the frontal sinuses, with frontal pains, have also been cured by repeated injections.

3. *Ethmoidal Sinuses*.—In the communication mentioned above he had described two cases of osseous bullæ of the middle turbinate enclosing pus, polypi, and granulations. He opened them, scraped them, and tamponned the cavity; but as cure was not obtained he removed the thin walls of the cavity with chisel, forceps, and snare, and cure followed. In three cases of suppuration of the anterior ethmoidal cells it was necessary to open them freely and curette twice.

4. *Combined Affections of the Sinuses*.—Five times he had observed suppuration of the maxillary and frontal sinuses. The first was treated by tamponning and the second by irrigations. In one case only did he obtain cure. As to the others, all the cavities cannot always be opened, but injections lessen the sufferings and the fœtidity of the secretions. In four cases chronic empyema of the antrum of Highmore was associated with suppuration of one or more ethmoidal cells and once with necrosis. In one case the frontal sinus and one ethmoidal cell were affected. The treatment of ethmoidal affections consisted of removing the necrosed bone, in opening the cells filled with pus (with or without curetting), in removing the small osseous lamellæ and hypertrophied mucous outgrowths, without ever producing great reaction. Suppuration then ceased, and irrigations completely cured—or at least notably improved the condition. He shares Grünwald's opinion that there exist ethmoidal suppurations and necroses which are neither syphilitic nor tubercular, none of his patients suffering from these affections. But he is as strongly opposed now as he was in 1894 to the idea that recurrent nasal polypi and ozæna are commonly caused by ethmoidal suppurations, caries, and necrosis, for in sixty-one cases of polypi, and in one hundred and twenty-eight cases of ozæna, he has never met with these diseases in spite of the most careful examination.

5. *Sphenoidal Sinuses*.—He has sounded them three times, but they were empty. He has naturally only practised sounding in cases where a purulent collection of the olfactory cleft or of the nasal pharyngeal cavity raised a suspicion of an affection of these sinuses.

GROSSMANN related a case exhibiting the value and chances of curability of the methods employed in divers affections of the nasal sinuses. A strong, healthy man, fifty years of age, consulted the author for a fluctuating tumour the size of a cherry, situated on the upper lip. After incision a dermoid cyst as large as a nut was discovered in the region of the incisive foramen, between the bullæ lamellæ of the upper

maxilla. The cavity was exposed and stuffed with iodoform gauze. As, at the end of several months, the cavity did not close, it was cauterized and drained. In spite of regular and careful injections of phenic and sublimate solutions, swabbings of tincture of iodine and ichthyol, frequent applications of Paquelin cautery, the patient was not cured at the end of three years. The author believes that a dermoid cyst situated in the bone, *cæteris paribus* offers more chances of cure than an empyema of the antrum. In this case access was easy, for under illumination of the osseous cavities they could be seen exactly and controlled, and even preserved comparatively easily against the introduction of saliva, etc.; all, however, being unsuccessful in obtaining a complete occlusion. Ought we, therefore, to be astonished that affections of the sinuses should be so rebellious to all methods of treatment employed up to the present? To obtain cure it would be necessary that the internal wall of the cavity should resume its normal aspect, or that this should be emptied. We must then return to the old methods of operatory opening and resection of wall of the abscess cavity.

HAJEK wished to briefly compare his point of view with the opinions just emitted. We ought not systematically to exclaim against some extreme operatory methods, but we ought also to be careful to guard against the other extreme, namely, that the prohibition of opening of the sinuses cannot be sufficiently combatted. A few observations in which, in spite of opening the cavity, the secretion has not completely ceased or the cavity has filled with granulations, are not sufficient to demolish the principle of operatory intervention. To effect the latter we should base our ideas on the indication that when the discharge of pus from a purulent focus takes place under abnormal conditions, it is necessary to make an artificial opening. The question of knowing if the secretion will be certainly checked has only a secondary importance in relation to the indication. If on many sides it is remarked that the opening of the alveolar apophysis persists when cure is not obtained, this is no great evil; for it is better to make a hole into the maxilla to facilitate the issue of pus than to leave the pus stagnant in the sinus to decompose and produce various accidents. We can, with a simple apparatus, close the opening of the alveolar apophysis, and the patient may thus each day for a few minutes irrigate the sinus. He does not think that the natural opening into the sinus always suffices for the introduction of the canula and cleansing of the cavity; and even in cases where the orifice is large, there are grumous portions of secretion which remain in the sinus, and it is only by an artificial opening that the cavity can be perfectly cleansed. Reaching the sinus through the alveolar apophysis is without doubt the best and least disagreeable course. It is only in cases where the inferior part of the sinus is retracted (of which we are assured by the strong concavity of the external wall of the inferior nasal meatus) that it is necessary to avoid perforating the alveolar apophysis, because the trephine would almost infallibly enter the nasal cavity or the canine fossa, but not into the maxillary sinus.

Another point is to know if radical treatment, such as surgeons ordinarily practise, through the canine fossa, is indicated or not. The

operation is more important, but success is uncertain. If the opening through the alveolar apophysis is not successful, that through the canine fossa, according to published cases, does not give encouraging results. As to endo-nasal therapeutics in chronic suppurative catarrhs of the frontal sinus, we must not lose sight of two principal points—(1) the relative retention of the secretion in the frontal sinus provoked by hypertrophies or polypi of the middle meatus; (2) the increase of nasal secretion. We must never forget that stenosis of the middle meatus is generally the principal cause as much of the persistence of the suppuration as of the intermittent headache. The patient is much better on the disappearance of these troubles. We frequently observe spontaneous cure of suppurative catarrh of the frontal sinus following upon cessation of the cause of the stenosis—or, at least, the sufferings are reduced to a minimum. He has never practised, in the cases of chronic suppuration of the frontal sinus which he has observed, external trepanation of the sinus. Moreover, it is not indicated in cases of this kind, because increase of the muco-purulent secretion of the sinus, which may be very small and rapidly resolved without occasioning pain, does not justify a perforation of the frontal sinus. We have not to-day any such clear ideas of the operatory limits as regards the ethmoidal and sphenoidal sinuses as we have for the maxillary and frontal, for the reason that in these latter regions we have not mastered all the difficulties of diagnosis, and have not sufficient experience of the results of surgical intervention. We cannot, however, reject operation. The best known methods, however, give the worst results. In time, when we are able to arrive at more precise diagnosis and to operate with more perfect instruments, the results will certainly be superior to those of to-day. For a diagnosis of an affection of ethmoidal cells it is a prime necessity to remove the parts of the middle turbinated which obstruct the examination. We may then very easily distinguish the parts of the internal wall of the ethmoidal apophysis which secrete pus. It is not necessary to introduce large forceps and curettes; it suffices to enlarge, by means of fine instruments curved in crochet form, the aperture of outflow in order to facilitate the exit of the secretion.

The author does not speak of caries, for there is no means of recognizing it except by the probe, and he has of old insisted against this diagnosis. We know that a moderate operative intervention in the ethmoidal cells does not provoke any accident, and that we ought to regard it as very successful when it causes the cessation of suppuration and the cephalalgia. The same applies to the sphenoidal sinus, which should never be opened largely in cases of slight muco-purulent secretion, nor should the mucous membrane of the cavity be scraped or cauterized, since these are two severe operations never indicated by the small amount of suffering which catarrh of the sphenoidal sinus provokes. But a minor intervention may render great service when practised appropriately and with precautions, as he has assured himself in a case he had seen in which the anterior wall had been largely opened. The pus had remained in the cavity, and produced strong tension and violent headaches.

Meeting, June 7th, 1895.

President—Prof. CHIARI.

PANZER. *Technique of the Ablation of the Inferior Turbinate.*

The author has constructed special scissors, which are more easy to manage than ordinary snares. Cure is also much more rapid (three to four days), and he has succeeded with this instrument in cases where the snare had failed.

ROTH remarked that he had for several years used a similar instrument.

WEIL doubted if cure could be obtained so quickly.

CHIARI had used the same instrument for a long time, and as to cure he agreed with Panzer.

CHIARI presented a child upon whom he had some months previously *Trephined the Frontal Sinus.*

The condition was one of a piece of necrosed bone in the sinus, provoking a profuse purulent secretion of the nose. He could not make a diagnosis of tuberculosis or syphilis.

WEIL. *Papilloma of the Septum.*

The author showed a woman of sixty-seven, from whom he had removed a septal papilloma, which had slowly grown during a year; was bright red, hard, and muriform, with deeply segmented surface, and a thick pedicle, situated upon the antero-superior portion of the septum, filling almost the whole of the right nasal fossa. There was no pain, and it was removed almost without hæmorrhage. It was examined by Zuckerkandl, and pronounced to be papilloma, completely isolated, and of very large dimensions.

ROTH. *Phlegmon of the Retro-Nasal Cavity.*

A man, thirty-eight years of age, had rigors and pyrexia, violent pains on deglutition (occipital and aural), and rhinoscopically there was found intense redness and tumefaction of the retro-nasal cavity and pharyngeal tonsil, which was elastic and very sensitive to touch. The condition was aggravated for some days, the pains becoming intolerable, and the pharyngeal tonsil covered the inferior halves of the middle turbinates and the inferior meatuses. The orifices of the Eustachian tubes were red and swollen. Eight days after the onset there was spontaneous evacuation of pus and blood through the mouth and nose, and pain considerably diminished. The swelling of the pharyngeal tonsil subsided, and daily applications of nitrate of silver (two per cent.), and boracic nasal irrigations, caused the disappearance of all the objective signs of inflammation, and the patient was cured within fourteen days of the onset. The formation of a retro-pharyngeal abscess of such dimensions is exceptional. The author has found no such case recorded, the cases of phlegmonous inflammation of the retro-pharyngeal cavity

with suppuration recorded by Wendt being of traumatic origin or consecutive to variola.

WEIL asked if the patient had not suffered from follicular or lacunar angina, such a process on the pharyngeal tonsil being capable of leading to abscess.

ROTH had omitted to say that the patient had been very subject to anginas.

GROSSMANN said that in most cases of phlegmonous angina we had to do with a peritonsillar abscess opening posteriorly and high up, provoking inflammation of the arch of the palate, œdema of the uvula, etc., which caused the tonsils even of the same side to be only slightly affected. He thought that in the case described by Roth there may have been this pretty frequent form of peritonsillar abscess.

HAJEK. *Diagnosis and Treatment of Suppurations of the Sphenoidal Sinus.*

The author related in detail a case which presented difficulties of diagnosis. A patient, aged forty-five, had for nine years abundant suppuration of the right nasal fossa, and for seven years the pus had been thick. Last year there had been great cephalalgia over the right temporal region, and vertigo frequently. There were numerous polypi of the middle meatus, and hypertrophy of the middle turbinate. After removal of the polypi the maxillary sinus was found to be empty, and after removal of the anterior end of the middle turbinate, stagnant pus was no longer found in the middle meatus, nor in the frontal sinus nor ethmoidal labyrinth. The origin of the suppuration was still unknown, and the symptoms, especially the intense headache, persisted until the greater part of the middle turbinate was removed. A pulsatile point was then found after touching the anterior wall of the ethmoidal sinus. Three or four drops of thick pus came through a fine sound. Then with his crochet Hajek tore off a small portion of the anterior wall, allowing the exit of a quantity of thick, creamy pus. There was immediate relief. The cavity was packed with iodoform gauze, and nitrate of silver was instilled into the sphenoidal sinus; but suppuration not being completely arrested, the mucous membrane was scraped with the author's curette. There is now only a slight mucous discharge, and subjective pains have disappeared.

As to diagnosis of suppurations of the sphenoidal sinus, the author says that it is necessary rhinoscopically to determine the flow of pus in the olfactory cleft in front or at the posterior extremity of the middle turbinate. Pus proceeding from the posterior sphenoidal labyrinth produces the same effects. In certain easy cases a diagnosis is assured by introducing a sound through the olfactory cleft, or a small canula into the cavity. In destruction of the turbinate, as by syphilis, the cleft being larger the source of secretion is easily recognized. Where the turbinate is much hypertrophied and adjacent to the septum it is more difficult. Two things become necessary: (1) exploratory puncture of the sphenoidal sinus; (2) removal of the hypertrophied parts of the posterior extremity of the middle turbinate.

Up to six months ago Hajek performed exploratory puncture by a double canula, but has now adopted the second method as the only certain diagnostic one. Sometimes, but not often, the posterior part of the cleft may be simply enlarged. A muco-purulent collection in the olfactory cleft is not always due to an affection of the sinus, and may be due to partial inflammation of the mucous membrane of this region.

Other facts may lead to the confusion of an empyema of the olfactory cleft with that of the sphenoidal or posterior ethmoidal cells. The frontal sinus and anterior ethmoidal cells also frequently have their opening outside the region of the hiatus at the interior of the middle turbinated. Hajek has seen such cases, the pus coming from the frontal sinus and discharging outside the nasal hiatus, not discovered until all the middle turbinated had been removed.

A circumscribed necrosis of osseous parts near the olfactory cleft may also give rise to a suppuration with the same characters locally as that of the sphenoidal sinus.

There is only one absolute means of diagnosis. Where there is a suppuration of the olfactory cleft it is essential by every means to seek its source until the origin is found.

Hajek exhibited his instruments for the sphenoidal sinus : an exceptionally fine crochet and curette. Any opening into the sphenoidal sinus has a tendency to retract rapidly, and must be watched. It may be maintained open by a tampon, but this causes pain and swelling. Scraping is recommended by Hajek only in cases where three per cent. boracic acid and nitrate of silver instillations have failed. Hajek has never seen accidents, and thinks operation is indicated in certain cases. In cases not operated on the pus may, through obstructed exit, find a way through the orbit or cranial cavity, etc.

MEETING OF THE BELGIAN OTOLOGISTS AND LARYNGOLOGISTS.

June 16th, 1895.

(Concluded.)

CHEVAL said, in reply to M. Schleicher, that he introduced his needles by aid of their points or by a small hammer, and they are insulated by rubber tubes. To an observation of M. Noquet's, he replied that the destruction at the negative needle was undoubted in the bipolar method, but it exercises itself principally on the bone and cartilage, and in the mucosa is minimized and produces degeneration.

DELSTANCHE asked if any other method was used with the electrolysis.

CHEVAL declared electrolysis to be sufficient alone, and that he has practised, and he has used nothing but the douche with bland washes ;

and in reply to M. Delie, that ozænous pharyngitis benefited by intranasal intervention, but that he has applied special medication to this region and also used electrolysis.

CAPART then said a few words with reference to the treatment of ozæna. He had no doubt as to its contagiousness, and quoted numerous instances in favour of this. Heredity also seems to play an important part. He is convinced that it is not a disease of the sinuses only, but a specific affection of the mucosa, especially of the turbinates, which later affects the deeper structures: and that the ozæna is more curable than sinusitis, especially sphenoidal or ethmoidal. The treatment of the former, especially electrolysis, is futile in sinusitis. With a probe one finds the osseous middle turbinate has lost its superficial resistance and feels like parchment.

Of some of the usual treatments, the best are practical nasal injections two or three times daily. The following solutions are prepared by the speaker: A teaspoonful of a mixture of potassium chlorate 2·20 grains, sodæ bicarb. 1·30 grain, in half a litre of water; or a teaspoonful of a ten per cent. of carbolic acid in glycerine in half a litre of water. He had seen ozæna of long duration heal by these means only. In regard to massage, he had seen good results in certain cases, but not the brilliant results described by others. After numerous experiments with balsam of Peru, menthol, liquor Lugol, etc., he stopped at fluid vaseline, which is less irritating and soothes the patient. He has equally obtained numerous lasting cures by applying with some energy, every two or three days, on the middle turbinate pyoktanin or methyl blue. Finally, he has seldom failed after séances of cupric electrolysis, which is better than argentic electrolysis, finishing with a massage with methyl blue. For massage he uses Braunschweig's electro-motor instrument, driven by 120 volts. One should never despair of curing ozæna; one can, with experience and perseverance, cure a large number.

At this same meeting a new Belgian Society for Otology and Laryngology was formed, the necessity for which is the extent of the spread of the followers of this speciality in Belgium. Officers: Dr. Delie, President; Dr. Buys, Secretary; Dr. Cheval, Treasurer.

RUTTEN. *Presentation of a Patient cured of an enormous Syphiloma of the Right Lateral Wall of the Throat and Neck.*

The author dwelt upon the difficulty of diagnosis between syphilitic and sarcomatous tumours. In 1895 Esmarch stated that he had collected fifty cases of tumours treated as malignant which have been recognized later as syphilomata. The cure of many cases supposed to be sarcomatous, and presenting recurrences after operation, had also been ultimately obtained by iodide of potassium in large doses. Histological examination was not always certain, for embryonic cell growth, imitating a sarcoma, might be produced by common inflammations; and actinomycosis especially produced tumours of sarcomatous aspect.

The case presented by Rutten was of this class. A growth had developed in the lateral wall of the pharynx of a woman aged sixty-four, which, a few months afterwards, extended outwards under the angle of

the jaw, and rapidly assumed enormous development. After microscopical examination of a fragment, and consultation with many surgeons in Brussels, she entered the St. Jean Hospital to undergo radical operation. She left without going under operation, and shortly afterwards the tumour of the carotid region was removed by her own surgeon. The operation lasted two hours; large fleshy masses were removed, and the cicatrix left extended from the mastoid to the clavicle, being fourteen centimètres long. The growth in the throat, which was left intact, began to develop rapidly. It was hard and smooth, immovable, and painless, filling three-quarters of the throat. No solid food could be swallowed. There was wasting, cachexia, and lancinating pain in the right ear. The arch of the palate, largely hidden by the tumour, had ulcerations along its edge. The administration of six grammes of iodide of potassium a day, and repeated applications of a concentrated solution of corrosive sublimate to the tumour, cured the patient in six weeks. The patient has been cured for eighteen months. The cervical tumour would, no doubt, have yielded to the same treatment if it had not been operated upon.

REVIEWS.

Garnault, P.—*Précis des Maladies de l'Oreille.* Par P. GARNAUT, Docteur de Médecine. ("A Manual of Diseases of the Ear.") With 173 figures in the text. Paris: Octave Doin, 1895.

THIS compact little manual is one of those lucid and condensed *résumés* of what is known in regard to otology in which the more voluminous works on anatomy and otology are laid freely under contribution. But the matter does not end here. The author, in addition to showing his qualifications as a condenser and clarifier of current literature, impresses upon it all the *cachet* of his own individuality, and gives an excellent and original account of those branches of otology with which he has more particularly identified himself. To illustrate the former element in the work, the value of the book is very greatly increased by the introduction of a large number of illustrations from the works of Politzer, Testut, Schwalbe, Zuckerkandl, Sieberman (corrosive preparations), Boettcher (embryology), Kuhn, and Gruber, which will be, no doubt, an inducement to a large number of readers to possess themselves of the book.

We presume, however, that we may credit the able author himself with the very ingenious schematic section of the ear on page 77, in which the relation of the cavities of the internal ear is very well brought out. The idea of the osseous capsule of the labyrinth is, perhaps, somewhat exaggerated, but it facilitates greatly the comprehension of those cases of more or less complete exfoliation of the labyrinth with which clinical reports have made us familiar. The personal element comes in very strongly in regard to sclerosis of the middle ear. Dr. Garnault's

bias in favour of intra-tympanic operation is doubtless well known, and in regard to sclerosis little is given as to treatment, except a reference to the chapter on operative intervention, and in particular the extraction of the ossicles. He considers this operation of the ossicles indicated—first, for the arrest of chronic suppuration, and, second, for the diminution of deafness and tinnitus in some non-suppurative conditions. The former is now no longer matter of dispute, but his views with regard to this treatment in the non-suppurative conditions are still within the domain of the debatable.

Along with Lucas and Kessel the writer has seen fit to give up mobilization and synchotomy of the stapes in favour of extraction. The latter operation he performs after Stacke's method, rather than through the meatus. As regards its indications, he holds that our knowledge is as yet insufficient to enable us to arrive at absolute conclusions, but that we must study it and watch the results as from time to time the small statistics increase.

A staunch believer in vibratory massage for nasal affections, Dr. Garnault has employed it in diseases of the ear. He describes very fully the various methods, including the use of electro-motor vibrators adapted for the Eustachian tubes and the tympanum. The more familiar subjects are dealt with very clearly. The general practitioner will find this a valuable guide-book, which may be read with advantage even by those who are educated specialists, due allowance being made for an enthusiast's almost universal recommendation of vibratory massage.

Dundas Grant.

Pedley.—*The Diseases of Children's Teeth; their Prevention and Treatment.* By R. DENISON PEDLEY. T. P. Segg & Co., 289-291, Regent Street, W.

THIS book, which shows what striking progress dentistry is making, both as a science and a art, is one which, perhaps, should interest us more than we are aware: and to all those interested in the reflex causation of disease the chapter on oral hygiene will be of special interest, as will those parts dealing with the palatine vaults and the shape of the jaws. Though the book is necessarily chiefly intended for dentists, its sphere of usefulness is not confined to them.

Luke.

Ruault.—*Le Phénol Sulforiciné dans la Tuberculose Laryngée.* ("Solution of Phenol in Sulphoricinate of Soda in Tubercular Larynx.") By A. RUULT (Paris). Paris: Masson.

AS much as fifty per cent. may be dissolved in this sticky, syrupy fluid. On the formation of emulsion with the fluids in the throat the constituent elements of the solution are not dissociated, and consequently a forty per cent. solution of phenol can be applied as a paint without pain or destruction of tissue. The application, which may be made daily, is followed by hyperæmic reaction, with rapid filling of ulcers by granulation tissue. No cicatrix remains after the healing of ulcers, which usually results in four to six weeks: but either no trace is left or a condition resembling pachydermia diffusa persists. Infiltrations appear to undergo sclerosis, and in advanced cases causation is hastened. Success depends

almost entirely on the local condition, and "cure is almost the rule" in catarrhal cases and in limited ulcerations about the glottis, while tubercular tumours yield readily. With diffuse infiltration and involvement of the epiglottis cure is rare, but dysphagia is often abolished and stenosis prevented. The author has treated five hundred cases during six years, and the application is highly spoken of by Massei and Heryng.

Ernest Waggett.

BULLOCK'S COCAINE LOZENGES.

THESE lozenges are made with a sugar basis, but are much softer than such lozenges usually are: they dissolve very readily, and, but for the effect of the cocaine, they might be taken for ordinary sweets, so agreeable is their flavour—no small point in their favour, when one considers the ordinary cocaine lozenge.

MENTHOL SNUFF.

MESSRS. BURROUGHS, WELLCOME & Co. have brought out a most elegant box, which contains this snuff; formed chiefly of menthol, ammon. chlor., camphor, lycopodium, and cocaine one-sixth per cent. The action of this snuff is extremely pleasant, the temporary warmth produced being quickly followed by a great relief in breathing, if the nose is obstructed. This should be of great use in *nasal* asthma.

THE
JOURNAL OF LARYNGOLOGY,
RHINOLOGY, AND OTOTOLOGY.

VOL. X.

FEBRUARY, 1896.

No. 2.

Original Articles are accepted by the Editors of this Journal on the condition that they have not previously been published elsewhere.

Twenty-five reprints are allowed each author. If more are required it is requested that this be stated when the article is first forwarded to this Journal. Such extra reprints will be charged to the author.

The Editors are not responsible for opinions expressed in original Articles or Abstracts in this Journal.

Editorial Communications are to be addressed to "Editors of JOURNAL OF LARYNGOLOGY, care of Rebman Publishing Company, Limited, 11, Adam Street, Strand, London, W.C."

SOCIETIES' MEETINGS.

PROCEEDINGS OF THE LARYNGOLOGICAL SOCIETY
OF LONDON.

Ordinary Meeting, December 11th, 1895.

FELIX SEMON, M.D., F.R.C.P., *President, in the Chair.*

Papilloma of Nose.

MR. CRESSWELL BABER gave a further account of this case (Rev. —, aged thirty-six), which was shown before the Society on April 10th, 1895.

On April 22nd the growth, which was attached to the floor of the nasal cavity and lower part of the septum, was removed (under gas and ether) with knife and curette, bringing away in addition to the soft tissue a small piece of cartilage, apparently from the floor of the nose. The wound, which extended down to the bone, was then freely touched with the galvanic cautery. It healed satisfactorily. There was a slight growth of soft tissue on the septum, further back behind the original growth, which appeared on removal to be mostly granulation tissue. When the patient was last seen (November 29th) there was no sign of any recurrence of the growth, and the healed surface was quite smooth. Microscopic examination showed the growth to be papilloma: the detailed report (for which he was indebted to Mr. H. H. Taylor) is to the effect that the growth consists of a number of branched processes. Each process is made up of—(1) a central fibro-nucleated tissue, which is sharply defined from and supports (2) a thick layer of epithelium, the

deepest cells of which are from eight to ten in thickness, placed longitudinally to the surface, with oval nuclei. The cells above these are larger, irregular in outline, and contain large nuclei. The most superficial cells are flattened, and all, right up to the surface, contain flattened nuclei.

Mr. DE SANTI referred to a case shown by him at the Society a year ago. It was that of a man who had a growth from the septum, which on removal proved to be a true papilloma. It had not recurred.

Dr. HILL stated that Dr. Seanes Spicer had shown a case of true papilloma a little while ago. We had now had three cases of true papilloma shown to the Society, and they all had grown from a point near the entrance to the nose.

Case of Growth on Left Vocal Cord. Shown by Dr. J. B. BALL.

T. D., aged forty-eight, a mechanic, has suffered from hoarseness for three years, which appears to slowly get worse. On laryngoscopic examination a small tumour is seen, pedunculated and freely movable, attached by a broadish base to the inner edge of the left vocal cord, about the junction of the anterior third with posterior two-thirds of the cord. It is about the size of a small pea, smooth, and of a pale red colour. On phonation it lies between the cords, preventing complete approximation. It has the appearance of a soft fibroma.

Dr. DE HAVILLAND HALL considered it a soft fibroma of the vocal cord.

Dr. W. HILL and Mr. W. R. H. STEWART thought the growth came rather from the under surface of the cord than the outer edge.

Pathological Specimens of Tubercular Infiltration of Pharynx and Tongue. Shown by Dr. CLIFFORD BEALE.

The two specimens were taken from cases of long-standing tuberculosis of the lung. The ulceration had only appeared within a few weeks of death, and seemed clinically to be only of a superficial character. The microscopic examination, however, very carefully carried out by Dr. Hugh Walsham, proved that the infiltration of the tissues beneath the ulcers had extended deeply into the muscular layers, both in the pharynx and on the tongue. There had been remarkable enlargement of the papillæ of the dorsum of the tongue, but there did not appear to be any connection between this and the tubercular infiltration. In one case the tonsil was found to be free of any tubercular affection, although during life it was constantly bathed in tuberculous debris from the ulcer. The infiltration of the affected tissues had evidently begun at a much earlier period than the ulceration.

Microscopical Section of Round-cell Sarcoma of the Thyroid. Shown by Dr. BENNETT.

Case of Naso-Pharyngeal and Nasal Polypi. Shown by Mr. L. LAWRENCE.

E. L., aged twenty, a strong, healthy-looking girl, first noticed a stoppage in her nose about a year ago. Since that time it has gradually been growing worse.

Both nostrils are practically completely blocked with nasal polypi of the mucous variety. There is a large mass in the naso-pharynx, chiefly

on the right side. This presses on the soft palate. The naso-pharynx is not completely blocked. The mass is red and fairly firm to palpation : no spontaneous bleeding has ever occurred. The patient is not losing flesh, and there are no enlarged glands.

Mr. DE SANTI suggested it was a case in which the soft palate should be split, and the growth removed that way.

Mr. CRESSWELL BABER considered this a case of simple mucous polypi in the nasal cavities and hanging down into the naso-pharynx, which might be removed by means of a snare. It was important to use rather stiff wire.

Mr. SPENCER suggested that, if it was not possible to get the growth away with the snare, Lowenberg's forceps should be tried.

Dr. DUNDAS GRANT would remove with polypus forceps.

Dr. PERMEWAN thought the case simply one of mucous polypi, and he would hesitate to recommend splitting the palate. He would use the snare simply, and had lately removed an exactly similar one.

Mr. WAGGETT had generally found these growths were cystic on examination.

Dr. SCANES SPICER thought this case was undoubtedly cystic, and would recommend the use of polypus forceps if the snare failed.

Mr. LAWRENCE, in reply, thought he would be able to remove the growth with a snare.

Pathological Specimens of Tubercular Ulceration of Trachea, Larynx, and Pharynx. Shown by Mr. DE SANTI.

1. Male, aged twenty-eight ; began to be ill in October, 1894 ; signs of phthisis soon manifested themselves, and he gradually got worse. Throat became painful, and he lost his voice early in October, 1895. Laryngoscopic examination showed well-marked tubercular disease of larynx. At the beginning of November an ulcer about the size of a sixpenny piece was found in posterior wall of the pharynx. Patient died on November 20th.

Post-mortem.—Well-marked extensive phthisis and empyema : well-marked tubercular ulceration of trachea and larynx. Tubercular ulcer size of a sixpenny piece in posterior wall of pharynx.

2. This man was operated on for tubercular disease of right metatarso-phalangeal joint in October ; he was suffering from phthisis at the time. The disease rapidly increased. In the beginning of November miliary tubercles were found on the soft palate, fauces, and pharynx.

Post-mortem.—The pharynx and fauces are the seat of tuberculous deposit and ulceration. There is a small ulcer at base of the left vocal cord.

Dr. DE HAVILLAND HALL said he had another similar case under him ; it was extremely rare to have three cases of tubercular disease of the pharynx in the ward at the same time.

A Case for Diagnosis. Shown by Dr. F. SEMON.

The patient, a gentleman aged thirty-five, was sent from Western Australia by Dr. H. J. Lotz, with the following history :—

He caught cold twenty years ago, and has been hoarse ever since. Four years ago he had what was called a sarcoma removed from the testis, but subsequent attendants had thrown doubts on the correctness of this diagnosis. Fifteen months ago he caught fresh cold; after this he suffered from dryness of the throat and cough in the morning. For two or three months at that time he occasionally brought up some blood. He consulted a specialist in Adelaide, who found thickening of the vocal cords. After this the throat gradually got weaker, and ultimately the voice was almost lost. He saw another specialist in August of this year in Adelaide, who found a growth in the larynx, and removed a portion for diagnostic purposes. The piece removed, however, was too small to make microscopic sections. Till this he had never complained of any pain or feeling of discomfort in the throat. In October of this year he caught a fresh cold, his throat began to feel raw and dry, and the cough in the morning increased.

On laryngoscopic examination Dr. Lotz found congestion of the mucous membrane of the larynx. The left ventricular band was swollen, particularly anteriorly, and presented here a small excrescence, which was of the same colour as the surrounding mucous membrane. The right vocal cord was very much ulcerated. There was no ulceration on the left vocal cord, which moved fairly well. On the left side of the laryngeal surface of the epiglottis there was a narrow streak of superficial ulceration. Externally the thyroid glands were felt enlarged. The patient was ordered to take fifteen and twenty grain doses of iodide three times a day for about a month, and during that time he put on flesh and felt much better; his voice had also improved, but this, in Dr. Lotz's opinion, may have been due to the improvement in the acute laryngitis produced by instrumental interference. Nothing abnormal could be detected in the lungs. The sputum was repeatedly examined for bacilli without results. There was no history of syphilis.

Dr. Lotz, who was unable to decide as to whether the affection was tubercular or syphilitic, sent the patient for diagnosis.

On examination the remnants only of the condition described by Dr. Lotz were found, with the exception of the condition of the left ventricular band, which even now shows the remains of the excrescence described by him. The right vocal cord, which at the time of the patient leaving Australia was described as "very much ulcerated," shows only very superficial ulceration in the neighbourhood of the vocal process, and moves well. On the epiglottis the ulceration on the left side has been replaced by two spots of white discolouration. The left vocal cord is still somewhat swollen, but the voice is much better. Patient has been taking iodide of potassium all through. The questions arising are:—

1. Is the affection tubercular or syphilitic?
2. Has it anything to do with the "sarcoma" removed four years ago?
3. What is the nature of the excrescence of the left ventricular band?

Dr. SCANES SPICER thought that the bright redness of the parts pointed to syphilis.

Dr. POORE noticed that the left vocal cord did not move properly.

Dr. HILL did not think it was tubercular. He stated that in some

parts of Europe there was a kind of ulcerative laryngitis, but in this case there were no crusts found. The patient had evidently improved since he left Australia.

Dr. SEMON, in reply, said he had not yet made up his mind what the case was; the epiglottis looked like syphilis, the vocal cord like tubercle, and the ventricular band—he did not know what it looked like.

A Case of Laryngeal Stenosis. Shown by Mr. W. G. SPENCER.

A woman, aged fifty-three, was first under the care of Dr. De Havilland Hall, who then found a chronic laryngitis secondary to hypertrophic rhinitis. The latter was cured, but the larynx did not improve. There is now extreme laryngeal stenosis, so that with the deepest inspiration the larynx does not dilate to more than two millimètres at the widest part. There is a hard mass between the arytenoids and in front of the cricoid.

On several occasions she has had attacks of dyspnoea, which have been relieved by lactic acid in increasing strength up to the full B.P. acid.

Should operative measures become imperative, excision of the vocal cords will be tried; but there have not yet been indications sufficient for an operation not only dangerous but of doubtful efficacy. In all probability the framework of the larynx would sink in. Small operations such as the cautery or curette would only tend, it would seem, to further narrowing.

The disease is now stationary: a fibrous contracture has involved the inter-arytenoid fold, the perichondrium, and probably the nerve-fibres of the abductor muscles.

Dr. DE HAVILLAND HALL stated that the patient had been under his care, at intervals, for upwards of twelve years. At first the patient suffered from chronic laryngitis with subacute exacerbations. At this time there was marked nasal stenosis due to hypertrophic rhinitis. Dr. Hall suggested that the chronic hypertrophic laryngitis or fibrosis of the larynx was due to interference with nasal respiration.

The PRESIDENT said that if such a case as this was due to nasal obstruction, why was it not more often seen? He would like to know on what grounds such a suggestion was made.

Dr. SCANES SPICER agreed with Dr. Hall in maintaining, as a general truth, that an unfavourable influence was exercised by chronic nasal obstruction (and its resultant—mouth breathing) on the mucous membrane of the larynx, trachea, and lower respiratory tracts, in producing and maintaining congestive and inflammatory states. He thought that in this case the nasal obstruction which Dr. Hall found must have had a pernicious influence, and that it had rightly received attention. With reference to the present condition of the patient, he advised curettement (with Krause's double laryngeal curette) of the large hypertrophic or pschydermatous mass of the posterior wall—preferably at once, but at any rate on the slightest increase in laryngeal stenosis.

The PRESIDENT said he would like to know how many cases such as this, in which the nasal obstruction was supposed to have caused the condition of the larynx, had occurred. He did not believe it was thus

brought about. Why should the larynx be deemed incapable of suffering from a chronic inflammation and thickening, independently of the nasal trouble? Of course, if there was concurrent mischief in the nose it ought to receive treatment.

MR. C. BABER did not think that obstruction of the nose could mechanically produce the condition of larynx seen in this case. He thought that the inflammatory trouble might be of the same character in the nose and larynx.

DR. DUNDAS GRANT, while a great believer in the influence of nasal obstruction in producing laryngeal disease, could not consider the hypertrophic rhinitis described as sufficient to produce such extreme changes. He had seen similar conditions follow nasal disease, but only nasal disease of a purulent nature—presumably suppuration in the sphenoidal or other sinuses, the infective material inhaled from these infecting the interior of the larynx, and setting up severe inflammatory conditions.

DR. PERMEWAN failed to see any real evidence that this laryngeal condition was secondary to nasal obstruction. He regretted the tendency to deny to the larynx a liability to primary disease. In this case he thought the infiltration was under the perichondrium as well as in the mucous membrane, and that there was ankylosis from arthritis of the crico-arytenoid joint.

DR. ST. CLAIR THOMSON asked if chronic alcoholism as a cause had been excluded, and if the classical treatment by salt-water spray and paintings of solution of nitrate of silver had been used.

DR. DE HAVILLAND HALL, in answer to Dr. W. Hill, said that there was no history of an acute attack of laryngitis.

MR. SPENCER, in reply, said he did not see the case until three years ago. He thought a purulent catarrh, as suggested by Dr. Dundas Grant, had taken place, and a thickening of the perichondrium had been caused. The case had now been stationary for three years. There was no history of chronic alcoholism; nitrate of silver had been tried without effect. He thought curretting would do more harm than good. Lactic acid was now being tried.

A Case of Thyroid Disease after Operation. Shown by MR. EWEN STABB.

This was the lad shown at the last meeting of the Society; the tumour had been removed and the wound was quite healed.

MR. STABB, in answer to Dr. Poore, said there was a distinctly cretinous history in this case.

Case of Large Fibroma of the Nasal Septum. Shown by MR. W. R. H. STEWART.

W. G., aged between fifty and sixty, came to the Great Northern Central Hospital in May last for complete blockage of the nose and some hæmorrhage. He stated that he had a blow on the nose forty-four years ago. Twenty-five years ago the nose began to get blocked. He then saw a doctor, who told him that a serious operation would be necessary to thoroughly

remove the growth. Nothing was done, and the case gradually became worse until complete blockage of both sides was established. The nose was considerably bulged on the left side. Examination revealed a large tumour projecting slightly from the anterior naris and filling up the naso-pharynx. A small portion removed for microscopical examination proved to be fibrous tissue. Under an anaesthetic an attempt was made at removal by the *écraseur*, but it was found impossible to get the wire between the roof of the naso-pharynx and the tumour. Further digital examination seemed to indicate that its origin was the base of the skull. A week afterwards Mr. Macready, at Mr. Stewart's request, after a preliminary tracheotomy turned back the upper jaw on the left side, performing a slightly modified Mansell-Moullin operation. The tumour was pulled away with some difficulty, the posterior knob being firmly held by atmospheric pressure in a rounded hollow in the base of the skull. The growth measured when fresh 4 by $2\frac{1}{2}$ by $1\frac{1}{2}$ inches, and was found to have grown by a very small pedicle (which contained a piece of bone) from a ridge on the much-distorted septum. Mr. Waggett reports that the microscopical examination of a section from the centre of the growth showed it to be composed of a very dense white fibrous tissue, arranged as lobes growing from a less dense central hilum which contained spicules of bone near the pedicle. The patient made an uninterrupted recovery. This is, as far as published records go, an unique case. The only account to be found of a pure fibroma growing from the nasal septum is one recorded by Lefferts: this was the size of a hazel-nut, and growing low down near the anterior naris. Mr. Stewart expressed his indebtedness to Mr. Waggett, not only for his careful research amongst the literature on the subject, but also for some excellent drawings of the fresh tumour made a few hours after removal.

Mr. WAGGETT said that a very small number of firm fibrous septal tumours are recorded in literature, and in most of these there was a traumatic history. The largest was the one reported by Lefferts, and that was the size of a hazel-nut: so that the present case is quite unique in point of size.

The PRESIDENT suggested that as this was an unique case a wood-cut should be obtained for insertion in the Society's "Proceedings."

Mr. SYMONDS communicated further notes of two cases of diseases of the septum nasi shown in October. In the case of the man, W. H. C., aged forty-eight, the ulceration, the thickening of the septum, and the obstruction rapidly disappeared under iodide of potassium. In the boy, A. H., aged sixteen, the disease proved to be tubercle, both by the microscopical appearance of the section and by the presence of bacilli. The chief mass was removed, leaving a large aperture in the septum, and he was still under treatment by lactic acid and the curette.

Case for Diagnosis. Shown by Mr. E. B. WAGGETT.

A woman, aged fifty-four, gave a history of an impacted fish-bone, with symptoms persisting for fourteen months. The pharynx, examined two months after the accident, was acutely inflamed. There was a small

swelling on the lateral epiglottic fold, which remained unchanged, with persistence of discomfort and pain, for fourteen months. There is no localized inflammation, and no evidence of a wound or of a foreign body.

Dr. W. HILL thought it was a small keloid tumour.

Dr. POORE would like to hear if anyone had ever found a fish-bone in the throat, and what became of those not found.

The PRESIDENT stated that in nine cases out of ten no foreign body could be found, but it was necessary to continue the examination for some time. In one case he had, after half an hour's search, found a bone three-quarters of an inch long in the tonsil, only a very small portion of which was showing.

Mr. SPENCER said that after a time ulceration sets up and the fish-bone comes out. Sometimes, of course, this becomes a very dangerous process, the large vessels becoming perforated.

Mr. WAGGETT, in reply, said that the swelling was freely movable, and therefore probably not keloid, as suggested. Dr. Whistler had removed a fish-bone an inch long, which had remained undetected after frequent examination extending over several weeks.

Case of Inspiratory Spasm of the Vocal Cords. Shown by Dr. W. A. WILLIS.

Mrs. M. D., married, aged forty-four, came to the out-patient room at the Westminster Hospital on November 7th suffering from dyspnoea and huskiness, which had come on the previous day.

Her respirations were fifty per minute and her pulse one hundred and twenty, and there was some lividity. On examination of the larynx there was slight laryngeal catarrh, and with inspiration spasmodic approximation of the vocal cords, leaving only a narrow chink at the posterior part of the glottis.

She said she had had similar attacks to the present during the last six or seven years, but not so severe.

She was ordered to keep in a warm room and to use pine oil inhalations, and in the course of the next ten days she improved; but the spasm was still present on the slightest excitement or exertion. She was therefore sent into the ward under Dr. Hall, to whose kindness Dr. Willis is indebted for the opportunity of showing her to-day.

There she has steadily improved, with the exception of one night about a week after admission, when there was so much spasm that she had to use chloroform inhalation.

Under ordinary circumstances there is now no spasm, but laryngoscopic examination is generally sufficient to reproduce the condition.

There is no evidence of marked hysteria in this patient, though she may, perhaps, be somewhat emotional; but the laryngeal condition may, it is presumed, be looked upon as entirely functional. Such cases, however, are not free from danger of asphyxia, notwithstanding the absence of organic disease.

Dr. SCANES SPICER thought this was a case of real abductor paralysis.

Dr. PERMEWAN drew attention to the spasm of the soft palate, and would be inclined to emphasize the connection.

The PRESIDENT thought it was a case of perverted action of the vocal cords. He remembered a similar case at Golden Square, in which a cold douche produced functional aphonia.

Dr. W. HILL had a similar case for some months under bromide; she got better, but she also had functional aphonia.

Dr. C. BEALE drew attention to the fact that the glottis did not completely close, and the patient could breathe during a spasm.

The PRESIDENT said that, for making a differential diagnosis between such a case as this and one of bilateral paralysis, it was necessary to make the patient phonate as long as possible; he then must take a breath. In these cases at this moment the vocal cords separate widely; in bilateral paralysis they become tightly closed.

THE NEW YORK ACADEMY OF MEDICINE.

November 27, 1895.

Dr. D. BRYSON DELAVAN, *Chairman.*

SECTION ON LARYNGOLOGY AND RHINOLOGY.

Dr. C. G. COAKLEY exhibited a *Rubber Bib* intended for the purpose of catching the discharges during operations upon the nose and mouth. It is made by Meyrowitz.

Dr. R. C. MYLES referred to a similar device made by the White Dental Company.

Dr. WENDELL C. PHILLIPS said that in this connection he would like to call attention to a rubber-cloth apron, with an elastic holder to pass around the neck to retain it in place. It is large enough to entirely protect the patient's clothing and also to cover the lap of the operator. They are made by the S. S. White Dental Company.

Laryngeal Ulceration Treated by Creosote Injections.

Dr. DWIGHT L. HUBBARD: S. S., male, aged thirty; admitted to the Throat Clinic of the Manhattan Eye and Ear Hospital, March 22nd, 1895. His mother died at the age of forty-five of hasty consumption. The patient began to be troubled with hoarseness and some pain in the larynx in November, 1894. He had a troublesome, irritable cough, and was compelled to give up his work on January 1st, 1895. There was scanty expectoration, occasionally tinged with blood. He lost fifteen pounds in weight from November, 1894, to February 1st, 1895. For several months he was under treatment at the Vanderbilt Clinic and the Presbyterian Hospital, creosote internally having been administered and local applications of creosote employed.

When he first came under my care (March 22nd, 1895), his voice was a hoarse whisper. Examination of the chest revealed involvement of the

lower lobe of the right lung. An examination of the throat showed that the cords were irregular, and in parts cicatricial from the healing of old ulcers. The posterior third of the right cord was infiltrated. The arytenoids were swollen and showed some infiltration. There was an ulcer about the size of a split pea upon the anterior wall of the trachea at about the second ring.

I began treatment with local applications of a solution of iodoform in ether, one dram to the pint, and creosote internally. A creosote spray was also employed. Two days later this treatment was stopped, and intratracheal injections of creosote, as recently recommended by Dr. Chappell, substituted. The injections were made three times weekly. At the same time the patient was put upon equal parts of pure beechwood creosote and tincture gentian co., commencing with 10 min. in milk, t.i.d., and increasing the dose to 50 min. as rapidly as the stomach would permit.

April 15th: The foregoing treatment was kept up continuously. Infiltration of arytenoids less pronounced. Ulcer in trachea smaller and granulating. Has gained two pounds in weight.

October 20th: On account of the much-improved condition of the patient the creosote and gentian was decreased to 20 min., t.i.d. The injections were also stopped, and applications with the laryngeal applicator substituted.

At the present time the ulcer in the trachea is quite small. You will observe considerable loss of cord tissue: considering the amount of tissue lost, the man has a fairly good voice. Although I do not claim that this patient is well, there has certainly been a marked improvement in his condition since the creosote treatment, as practised by Dr. Chappell, was begun. While the man was under treatment at the Vanderbilt Clinic his sputum was examined and the tubercle bacilli found.

A Case of Tuberculosis of the Larynx.

Dr. WALTER F. CHAPPELL: T. D., male, aged thirty-three. Patient came under observation on March 6th, 1895. His temperature was 100.2; pulse, 120: he had every appearance of extreme weakness and emaciation, having lost about twenty pounds in six weeks. He had considerable dyspnoea and dysphagia. The right ventricular band, cord, and arytenoid were thickened and red, and covered with numerous small ulcerations; the left cord and ventricular band were thickened, and the margin of the former somewhat serrated from ulcerations. The left arytenoid cartilage was enlarged and oedematous, and covered with small superficial ulcers. His sputum was examined and tubercle bacilli found. There was slight evidence of pulmonary disease.

The treatment consisted of creosote and gentian internally, and the topical application and submucous injection of creosote into the larynx. The injections were made three times weekly. Up to the present time the man has gained thirty pounds in weight, and the ulcerations in the larynx have entirely healed. All the oedematous swelling has subsided. One of the arytenoids is still rather large, and this condition will probably be permanent, and is due to the infiltration and hyperplasia

resulting from the tubercular inflammation. The patient now has a normal temperature; he is gaining in weight and has resumed his work.

The Chairman, Dr. DELAVAN: I have had the opportunity of examining Dr. Chappell's patient on two occasions during the progress of his treatment before this present one. I first saw him last June, and again in September. At the latter interview a very marked improvement was evident in his condition; to-night the improvement is still more pronounced. It is certainly a remarkably successful case. When seen in June it did not appear possible that the patient could live through the summer.

Dr. IRWIN H. HANCE: Last spring Dr. Chappell called my attention to this method of treatment, and thus far I have only had the opportunity to try it in two cases. In one case there was a small ulceration, while in the other no ulcerations existed. In the first case, after three injections, the ulceration assumed a very different appearance, and after about half a dozen injections it practically disappeared, and the throat was in a better condition. As in the case shown by Dr. Chappell to-night, a considerable amount of infiltration remained. This chronic thickening will be found, I believe, in all cases of tubercular laryngitis. I have observed a similar condition in a case apparently cured by application of lactic acid. If the treatment of tubercular laryngitis as proposed by Dr. Chappell will cure even a small percentage of these cases, it will be one of the greatest boons which can be offered to these suffering patients.

Dr. R. C. MYLES: I have examined the two patients presented to-night. In Dr. Hubbard's case we have a typical picture of a tubercular lesion undergoing the process of healing. In Dr. Chappell's case there is still a certain amount of infiltration in the left arytenoid.

Dr. CHAPPELL: In reply to the question asked by one of the members as to whether this method can be employed in cases where the pulmonary lesion is far advanced, I would say that I have used it indiscriminately, because it cannot do any harm. It does not cure every case. I have had several fatal cases, which I hope to report at some later date. Even in the worst cases, however, it has somewhat relieved the pain and swelling, and produced a marked diminution in the amount of secretion from the larynx.

A Case of Tumour of the Larynx.

Dr. RICHARD FROTHINGHAM: M. H., male, aged thirty-eight years, a sailor, first came under observation on October 23rd, 1895. He complained of hoarseness and some dyspnoea. Family history excellent. One year ago the patient weighed 160 lbs.; his present weight is 145 lbs. He has had a slight cough, with scanty expectoration, for about a year. Last January his throat became sore. The soreness steadily increased, and in April he commenced to get hoarse. In June he entered the Marine Hospital. There he was treated for ulcers of the throat. In eight weeks the local applications and internal medication entirely healed the ulcerations, and he has had no sore throat since. Evidences of cicatrization in the soft palate can still be seen.

An examination of the man's throat at the present time reveals a

pretty general thickening over the thyroid cartilage, especially marked on the right side. The glands on the right side of the neck are enlarged. With a mirror, a large, red, smooth, rounded growth can be readily made out above the vocal bands, involving the right side of the larynx, and occupying a considerable portion of that cavity. It extends beyond the median line, completely obscuring the right vocal band, and reaches high up on the epiglottis.

The laryngoscopic appearance of the growth suggests either gumma, malignant disease, perichondritis with abscess, enchondroma, or a cyst. As the man had a chancre sixteen years ago he was at once put on large doses of potassium iodide. Although for the past sixteen days he has been taking two teaspoonfuls of a saturated solution of the drug three times daily, no change in the growth is apparent. The patient states, however, that his voice is better, and that he has less dyspnoea. An examination of the man's chest shows decided evidences of tubercular disease. His sputum has not been examined for tubercle bacilli.

Dr. JONATHAN WRIGHT : The growth does not exactly resemble a malignant one. It reminds me of a tubercular growth I saw some years ago.

Dr. W. K. SIMPSON : This case reminds me of one I saw recently, in which the diagnosis baffled us all until after the removal of the larynx. It proved to be a chondroma of the thyroid cartilage, completely involving the right side.

Dr. R. P. LINCOLN : An enchondroma is so slow in its growth that it would hardly correspond with the history given by this man.

Dr. EMIL MAYER : The appearance of the lesion in Dr. Frothingham's case is such that I think tuberculosis can be safely excluded. The same may be said of carcinoma, because we do not see such glistening and firm-looking tumours in that affection. I am inclined to believe that the growth is specific in its nature.

Thyrotomy : with Report of a Series of Cases Operated upon during the past Twenty Years.

Dr. CLINTON WAGNER : There are two classes of cases in which thyrotomy will always be justifiable, if not absolutely necessary : first, malignant growths, for which the radical surgical treatment must be either thyrotomy or exsection of half of the entire larynx ; secondly, cases of occlusion of the larynx in very young children, such as I will describe later on. I shall endeavour to show that, although thyrotomy is not always a simple, easy operation, still it is not dangerous to life if carefully performed, neither is it necessarily destructive to the vocal function in non-malignant cases.

In performing the operation the shoulders of the patient should be well raised and the head thrown back, by which the skin covering the larynx is made tense and that organ thrown prominently forward. An incision should then be made through the skin and fascia from a little above the thyroid notch downward, in the median line to the cricoid. With a small probe-pointed knife the crico-thyroid membrane is divided, and then with a gentle sawing motion the knife is carried upward through

the thyroid cartilage. In young persons the section is made without difficulty ; but in middle-aged or old persons ossification of the thyroid will have taken place, to divide which the saw must be employed. I use a small file-cut saw-wheel, made to revolve by means of the electric motor. The section can be made in an incredibly short space of time. The incision is clean, and can be maintained in the median line without difficulty. Malgaigne says of this operation : " Ossification of the thyroid renders it absolutely impossible ; " but in his time the electric motor did not form a part of the surgeon's armamentarium. The difficulties of the operation begin as soon as the larynx is penetrated. The introduction of the knife, together with the flow of blood, produces violent reflex action. The larynx rises and falls spasmodically and very rapidly. The employment of a sharp-pointed knife or scissors at this stage of the operation is highly fraught with danger. During the rapid movements of the larynx its posterior wall might be penetrated, and thus cause a laryngo-oesophageal fistula. During the spasmodic action of the larynx, in spite of all that may be done to prevent it, a certain amount of blood will find its way down the trachea and into the lungs. If the patient is not fully under the influence of the anæsthetic (and he should not be), it will excite further reflex action. Violent coughing will follow, and the blood will be expelled.

I am always extremely careful in regard to the amount of anæsthetic administered. Coughing, under these circumstances, may be regarded as a danger-signal. In deep or complete anæsthesia it will not take place. The blood will collect, and death on the table, from asphyxia, may suddenly take place.

The divided edges of the thyroid should now be kept widely apart by retractors, the anæsthetic carefully pushed, and the removal of the growth, false membrane, or whatever the cause of the laryngeal occlusion may be, proceeded with. Except in cancerous growths, the hæmorrhage usually is not very great. In all my operations I have never found it necessary to apply a ligature. The only artery that lies in the course of the surgeon's knife is the crico-thyroid, which is very small, and can easily be arrested by compression. No evil effects follow the division of the cricoid cartilage. I usually cut down to the canula in the trachea, in order to gain more room. The canula may be removed during the operation if it is in the way, and it generally is. Silver sutures, as recommended by the earlier operators, passed through the thyroid, for the purpose of maintaining the divided edges of the cartilage in apposition after the operation, are quite unnecessary. If the skin is brought together by a few sutures, aided by plaster, it will maintain the edges of the thyroid in firm apposition.

Thyrotomy is not an operation for the display of brilliancy and dash on the part of the surgeon. It is a tedious operation, in which, in order to secure safety, celerity should not be attempted. The larynx of a child under five years of age is extremely small, the opening made for the play of instruments still smaller, which, with the flow of blood and the rapid, spasmodic movements of the larynx, tend to obscure the landmarks, and tax to the utmost the patience of the surgeon and his assistants.

I have performed thyrotomy in five adults and five very young children. My youngest subject was eighteen months old; my oldest sixty-six and a half years. Upon one of the adult cases I subsequently operated four times, and upon another a second operation was performed, both being for the removal of recurrent malignant growths. If I include these operations, the total number of thyrotomies I have performed will amount to fifteen. In none of these cases of malignant growth was the operation in any way responsible for the death of the patient. They all survived several months. With the exception of two, all the cases have been reported. I will therefore refer to them in as brief a manner as possible. The two that have not as yet been published I shall give more in detail.

Dr. Wagner then gave a report of his cases. He also presented a young man upon whom he had performed thyrotomy seventeen years ago, in order to demonstrate how well the vocal function is preserved.

The Chairman, Dr. DELAVAN: The subject of thyrotomy has lately increased greatly in importance. Much discussion has recently taken place regarding it. The conflict between the adherents of this operation and the endo-laryngeal method was formerly carried on with considerable asperity in certain quarters, and, as a result, more or less well-marked lines of demarcation are being established. The important point to decide is, In what cases should operation be attempted through the mouth, and in what cases should that method be abandoned in favour of thyrotomy? It has been shown that thyrotomy is not so severe or dangerous an operation as some have thought, and that in certain instances the advantages to be derived from it are considerable. The paper we have had the pleasure of listening to this evening should certainly strengthen this belief. The last case related by Dr. Wagner is one of unique interest.

Dr. SWAIN (New Haven): During the past eighteen months we in New Haven have performed two thyrotomies and one laryngectomy, which were all successful, so far as the operations were concerned. In one of the cases thyrotomy was performed in May, 1894, for recurrent papilloma of a very serious nature. We found the entire larynx filled with papillomatous masses, which sprang from all sides. They were carefully removed, and their bases cauterized so thoroughly that we supposed we had utterly destroyed the vocal cords in this process; but, to our surprise and comfort, the patient, a young woman, soon regained a very fair voice. Since the operation there have been two slight recurrences, which were treated by the endo-laryngeal method. The second case of thyrotomy was for malignant disease. The operation was performed with perfect success, but the growth recurred in six months.

I think the Chairman is quite justified in his remark that we have come to regard thyrotomy as a less serious operation than formerly. I believe that better asepsis, a more thorough knowledge of the operation in general, and the improved instruments at our command are largely responsible for the gain in our statistics in this operation.

Dr. MAYER: The value of the suggestion made by the reader of the paper to have a circular saw at hand for opening the thyroid when

performing this operation on the adult, was strikingly illustrated to me. In an operation of that kind at which I assisted quite recently, it required a good deal of labour on the part of the surgeon to cut through an ossified thyroid cartilage.

Dr. MYLES: I would like to inquire how Dr. Wagner prevents the blood from entering the bronchi after the operation?

Dr. WAGNER: As a rule, I take no special precautions whatever, simply placing the patient's head low, so that the blood will flow upward. In my last case I inserted a strip of iodoform gauze for drainage.

The Chairman, Dr. DELAVAN: In like manner with Dr. Wagner, Mr. Butlin uses no tracheal tube, and, as a rule, no intra-laryngeal dressing. He simply places the patient in such a position that the drainage will flow toward the head rather than downward, and dusts the interior of the larynx and the wound surface with iodoform. The outside of the wound is covered with iodoform gauze, which is changed as often as is necessary—perhaps a number of times daily. In throwing the powder into the larynx he takes advantage of the movements of deglutition; as the patient swallows, the wound in the larynx opens and the powder is thrown in. The act of swallowing liquid food is usually accomplished by these patients tolerably early in the history of recovery. The patients are fed per rectum for forty-eight hours, and then allowed to swallow a little water, the head being placed low, so that if the water is not swallowed it will run out again. If the patient is able to swallow the first mouthful of water successfully, then a little milk is given; and if he can swallow even small quantities of milk, rectal alimentation becomes unnecessary.

Dr. WAGNER: I usually feed these patients on milk and beef tea, allowing no solid food for ten days. The wound heals very rapidly. In regard to performing thyrotomy in malignant cases, my experience has not been sufficiently encouraging to repeat it. All my cases have ultimately died. Recurrence has always taken place, and I do not think I shall operate again in these cases unless the patients insist. In my experience the operation in these cases does not prolong life.

FRENCH SOCIETY OF OTOLGY AND LARYNGOLOGY.

Meeting, May, 1895 (concluded).

Subjective Noises in the Ear of Synæsthetic Origin; their Treatment.
By Dr. ANGIERAS (Laval).

The author's conclusions are that such noises exist, and that they may have their starting point in the cutaneous sensory nerves of the face and scalp—in particular the fifth and the great occipital, when these are affected with neuralgia. They are curable by means of electricity applied to the painful nerves, along with massage at their points of exit. They may disappear along with the neuralgia.

Cholesteatoma of the Middle Ear. Fistulous Canal. Ménière's Vertigo. By Dr. LACONNET (Toulouse).

Two cases illustrating this sequence of events are given, and the theories of the formation of cholesteatoma discussed. They are compared to the formations in caseous coryza, and to those frequently found in the crypts of the tonsils. As regards treatment, for the prevention of trouble means should be taken to quiet the too-active proliferation of the superficial layers of cells, and when the cholesteatoma is already formed endeavours should be made to remove it by the recognized means: instillations, injections, curetting, etc.; afterwards to modify the cavity in which it is found. If it is decided that operative intervention cannot make the hearing of the patient any worse, endeavour should be made to remove any obstacles which favour the retention of the products of desquamation by resection of a portion of the membrane, removal of the ossicles, etc.

On the Use of Electricity in Certain Affections of the Ear. By Dr. MOUNIER (Paris).

Dr. Mounier considers that electricity has the most scope and gives the best results in cases of decline of acute attacks, and in these he believes that the time necessary for the ear to recover its normal sharpness, if ever it does, is much shortened by this treatment. He prefers the Faradaic or induced current, for the following reasons:—(1) That the weakness of hearing power is associated with a weakness of the muscles of the middle ear. (2) That this form of electricity is better tolerated by the patient. (3) That the instruments and methods of use are simple. In order to have a suitable current it is necessary to induce it from a powerful coil of very fine wire. The cell is a simple bi-chromate one, of one litre in capacity. One electrode consists of a cylinder of copper, which the patient holds in his hand; the other a carbon olive, covered with chamois leather, which is introduced into the external meatus, and is not small enough to come in contact with the tympanum. The direction of the currents is immaterial. He commences with a very weak current, which he strengthens gradually, and never sufficiently to cause pain. The sitting usually lasts about five or six minutes, and may be repeated every three, four, or five days.

On Exaggeration of Auricular Synergy. By Dr. MOUNIER (Paris).

In this remarkable case a simple cerumenous plug in the left ear brought about for five months, by reflex action, total loss of hearing in the opposite one, which, however, had previously been injured. Immediately the plug was removed the hearing of the right ear returned. The patient had no neurotic tendency. The right ear after the injury, being in a state of nervous weakness, suffered a form of contre-coup, when probably the cerumenous plug underwent a movement which brought it in contact with the tympanum, at the same time lowering the hearing power of that ear and suppressing by synergy the hearing of the opposite (right) one.

Dr. GELLÉ thought that similar cases which occurred without traumatism could be attributed to hyper-excitability of auditory accommodation.

Dr. CASTEX had recently observed a case of auricular synergy due to an injury of the left tympanic membrane. The right ear was for some time affected with diminution of hearing power and with tinnitus, while at the same time there occurred a dys-harmonic diplacusis.

Acute Suppurative Median Otitis, with bulging of the Posterior Superior Segment of the Tympanum. By Dr. ESCAT (Toulouse).

Four cases are described, showing first that there exists a circumscribed form of acute purulent median otitis, unconnected with the attic and with the lower portion of the tympanum. It seems to be encysted in the posterior pocket of Troltsch, or possibly between the mucous folds situated behind this pocket. Its clinical characteristic is a bulging, limited to the postero-superior segment of the membrane. After paracentesis catheterism shows that there is no communication between the cavity affected and the other portions of the tympanum. The prognosis is as variable as that of the more generalized suppurations in the middle ear. The treatment consists in paracentesis in the postero-superior segment, suction by means of Siegel's speculum, antiseptic dressing, and occlusion of the meatus by means of sterilized cotton wool.

On Periotic Subcutaneous Phlegmonous Œdema. By Dr. GELLÉ (Paris).

In 1890, Dr. Gellé read before the International Congress of Berlin the accounts of cases showing that unilateral facial paralysis accompanied by pain is occasionally preceded by the appearance of acute subcutaneous œdema of the face, which is painful, and which may be situated either on the forehead, on the side of the face or head, and sometimes reaching the upper part of the neck. He adds some further observations of the same kind, including one of a man who, along with dulness of hearing of the left ear, and a slight sore throat, observed in several parts of his face and scalp on the same side some hot, painful, tense swellings, which appeared also in the mastoid region and around the ear. In about eight days this went down, and paralysis of the left facial nerve came on. In about three weeks an attack of gout supervened in the big toe of the left foot, and immediately all the other trouble subsided.

In these œdemas the seat of greatest tension, heat, and pain is the region surrounding the ear; sometimes the auricle is projected outwards and the groove is deleted, so that the condition may simulate mastoiditis. Occasionally the infiltration seems to extend through to the interior of the pharynx, and dyspnœa may be observed. As a rule the glands are not enlarged, and in many cases it may be found that on separating by means of a probe (covered with wool and slightly lubricated with boric vaseline) the swollen upper wall of the external meatus, the hearing power is at once restored, and the middle ear is found to be relatively intact.

Dr. Gellé is disposed to attribute the symptoms to an osteo-periostitis of the petrous bone, either rheumatic or infectious in origin. Petrosalpingitis would at the same time cause premonitory œdema and paralysis of the left facial nerve; rheumatic otitis, acute subcutaneous œdema with angina, and resolving or plastic otitis. Infectious otorrhœal exacerbation

would be the third source of such periotic phlegmonous œdema, and would be recognized by the history of the previous suppurative disease of the middle ear. Other cases might not be so readily explained, and would have to be attributed to some nervous action analogous to the periotic œdema experimentally produced by extirpation of the superior cervical ganglion. The diagnosis depends upon the absence of fluctuation, and of swelling of glands, and of local eruption. The swelling develops very rapidly—is very painful: in the form which terminates in facial paralysis its evolution is complete in from eight to twelve days. In the rheumatic and infectious form it lasts for a longer time, but in all the termination in resolution is a most distinct characteristic. It is to be differentiated from mumps by its unilateral character, and by its extending as much above and in front of the meatus as below it. From erysipelas it differs in the immobility, the unilateral position of the œdema, its diffuseness, the absence of enlarged glands, the obliteration of the meatus in certain cases, and in others the history of an old ear disease. Acute eczema and furuncles in the meatus are not likely to lead to confusion. In external otitis there is obliteration of the meatus, but absence of exudation, and of peri-auricular œdema. Deep median otitis has to be excluded by the restoration of hearing on opening the meatus. Mastoiditis, as has been said, may simulate it; but the periotic œdema may be distinguished from this by its rapid evolution, and in some cases by the occurrence of dyspnœa, to which reference has already been made.

In order to tell beforehand that the œdema is likely to be followed by paralysis of the facial nerve, we must remember the signs of petro-fallopitis are fixed pain on pressure being made on the tip of the mastoid process, and intense neuralgic crises; the œdema is less phlegmonous, more limited, and confined more to the face. The treatment carried out in one of the cases, in a child aged four, consisted of ice compresses, large doses of quinine, and sedatives at night.

Dr. VACHER had observed similar appearances in auricular herpes-zoster. There may be a fallacious sensation of fluctuation, and an enlargement of the lymphatic glands on the tragus.

On Methodical Plugging of the External Meatus with Iodoform Gauze as a Dressing in Inflammatory Affections of the Ear, more especially in Suppuration of the Middle Ear. By Dr. HAMON DU FOUGERAY (Le Mans).

This method of treatment, founded on the views of Lermoyez and Helme, has been carried out by Dr. Du Fougeray, who professes that it offers the advantages of, first, preventing the access of the germs floating in the air, and, secondly, preventing the patient from inoculating himself by means of his hands or the cotton wool, or any other material. The method of treatment is as follows:—A strip of iodoform gauze of three or four thicknesses is cut so as to have a length of three centimètres and a width of about one. With an aseptic speculum and forceps or probe this strip of gauze is introduced into the meatus, the internal extremity being placed as close as possible to the membrane of the tympanum (on which it ought not to exercise any pressure), and the whole length of the

canal is plugged up to its external orifice so that it is entirely occupied by the gauze. The patient is then left until the next dressing. When the suppuration is abundant the pus readily soaks the gauze, which ought to be renewed every twenty-four hours ; but, according to the amount of this, it may be left in position for two, three, or four days, or even longer. When the suppuration has ceased the plugging is continued for a few weeks, being only renewed once a week. The following are eighty cases in which it has been used exclusively :—

Median otitis, external abscess, furuncle	6
„ „ acute non-purulent	15
„ „ acute purulent	17
„ „ chronic simple purulent.....	30
„ „ chronic complicated purulent	12
	<hr/>
	80
	<hr/>

An average of ten dressings was required for each patient. He recommended the treatment very strongly in all the forms of disease enumerated.

Dr. HELME mentioned that a similar treatment had been recommended by Loewe, and that recently Gradenigo had published an important memoir on the subject.

Dr. HAMON DU FOUGERAY emphasized this point of view—that if, after about ten dressings, suppuration still persisted, a serious affection of the ear was to be suspected.

A Magnifying Glass to Fix upon the Finger. By Dr. MOLINIÉ (Marseilles).

This consists of a lens of a focus of eight centimètres on a jointed rod, fixed on a finger ring, which is carried on the first phalanx of the left index, and can obviously be placed in front of the speculum and removed from it with the greatest ease.

A Case of Double Median Otitis with Cerebral Complications. By Dr. VACHER (Orleans).

The patient was a cab driver, aged twenty-six, who was attacked with the symptoms of acute myringitis of the right ear, with probable effusion into the tympanum. Paracentesis gave vent to a quantity of blood, and the hearing returned at once. After several hours of ease pain returned again, accompanied by delirium, but without fever or vomiting. Things settled down for about a week, but after that time a new attack of furious delirium supervened, with occasional periods of coma ; but there were no other meningitis symptoms. The perforation of the membrane was still open, and there was no sign of suppuration. Antiseptic irrigation was carried out, and the case seemed to go on well ; but in about another week the glands of the neck, from the ear down to the clavicle along the border of the sterno-mastoid, began to swell ; there was tenderness on pressure, and the pain in the middle ear returned without any evidence of the drum being further affected. With the concurrence of Dr. Lermoyez it was decided to open the mastoid if the cerebral phenomena returned. A few days later, accordingly, this was done. There was no

trace of pus, and the mastoid wound was plugged with iodoform gauze. The whole of the troublesome symptoms disappeared as if by magic, but unfortunately a similar course of events seemed to start in the opposite ear. Paracentesis and aspiration were practised, leeches were applied to the left mastoid, and the attack proved milder and shorter than that in the other ear. There was no evidence of influenza, syphilis, or any serious disease. The complete restoration of hearing seemed to negative the possibility of an infection of the labyrinth. No explanation is offered of the swelling of the glands, which disappeared so rapidly after the opening of the mastoid, no pus being found. The speaker was of the opinion that if prompt paracentesis and other appropriate surgical intervention had not been practised, the patient's life would probably have been sacrificed.

Dr. MIOT asked if the bone-conduction was good, and if refrigerants had been employed.

Dr. VACHER replied that bone-conduction was good, and that he had not used refrigerants.

Dr. MIOT mentioned that in two similar cases a large vertical incision of the tympanic membrane and the employment of refrigerants had led to a rapid cessation of the symptoms.

Dr. HELME asked if the patient was rheumatic.

Dr. GELLÉ held that there was no otitis, but simply a violent hæmorrhage into the tympanum, of which he had observed two cases—one in a boy employed as a stoker, the other in a woman at the climacteric period of life.

Dr. VACHER replied that the patient was not rheumatic; and, in reply to Dr. Gellé, that the urine was examined and found free from albumen.

A New Acoumeter. By Dr. HELOT (Rouen).

The description of this was deposited in the hands of the Academy of Medicine on the 25th October, 1891, and it depended on the principle that the amount of sound entering the ear could be diminished by the interposition of a diaphragm with a larger or smaller opening in it. A number of such diaphragms could be placed one after another opposite the ear, and any source of sound could be employed.

Rupture of the Drum from Hanging. By Dr. LANNORS (Lyons).

The subject was sixty-one years of age, and in his previous history there was nothing of importance except a serious epistaxis of fifteen years previously, and from eighteen months to two years there had been slight enlargement of the glands on the right side of the neck. The enlargement of the glands seemed to extend into the mediastinum, and there was some difficulty in breathing. One night he was discovered hanging, having made use of his belt for his suicide. On *post-mortem* examination the face was uniformly livid, the nails cyanosed, the ears and lips blue, the latter having an ecchymotic festoon along the free edges. The eyelids were partially open, and there was an extensive ecchymosis under the left conjunctiva. There was nothing to remark in regard to the genital organs. In the hyoid region there was a well-marked genuine groove,

with slight œdematous edges, at the level of the larynx and just above it. The arteries and veins of the neck were normal, but the left great cornu of the hyoid bone was fractured. The larynx was not broken. The bones of the skull were of slight thickness. There was a sub-arachnoid hæmorrhage on the left side, at the level of the second frontal convolution. The ears were specially examined; the right one was perfectly normal. The left membrana tympani presented an oval rupture of from three to four millimètres in length, situated below and a little behind the handle of the malleus, and directed from above downward and from before backward. The edges were red and ecchymotic, but there was no hæmorrhage. After the removal of the roof of the tympanic cavity the bones were found to be in their place, without rupture of the ligament, but were covered with a kind of sanguineous effusion, which made them contrast markedly with those of the other side. The mucous membrane presented the same congested tint, almost ecchymotic, showing little red specks disseminated on the anterior and internal walls as well as at the orifice of the Eustachian tube. The labyrinth showed no congestive or hæmorrhagic lesion.

It is to be noted that the rupture was on the side on which there was no enlargement of glands. Zaufel's explanation is that the base of the tongue is forced upwards so as to compress the orifice of the Eustachian tube and increase the pressure of air in the tympanum.

This explanation is doubtful, in view of Wilde's remark that the air can escape by the nose; and Hofmann adds that, if this mechanism was the true one, there ought to be a rupture of both tympani, which has not yet been observed. The writer holds that the true explanation has not yet been discovered, but he thinks the observation may be of value in cases of doubt as to whether the patient has been hanged during life or the dead body has been placed in such a position as to simulate suicide.

Dr. GELLÉ had experimented upon dogs, and had found that during hanging there was intense congestion of the tympanum, which might go the length of hæmorrhage, while, at the same time, there was a pronounced anæmia of the retina.

Results of a Series of Fourteen Cases of Extensive Opening of the Cavities of the Middle Ear, by the Stacke-Zaufel Method, for the Radical Cure of Obstinate Otorrhœa. By Dr. LUC (Paris).

Opening of the attic by the Stacke method is applicable in all cases of chronic suppuration of this part of the tympanum which has resisted all methods of treatment practised through the meatus for several months, including extraction of the ossicles, except when the patient is of advanced age, or suffering from some grave pathological conditions such as tuberculosis or diabetes.

In most cases fungating osteitis of the attic affects simultaneously the antrum, and Dr. Luc's experience has forced him to adopt the principle of never opening the attic without opening the antrum at the same time. In some cases the participation of the antrum may be recognized beforehand: if, for example, an injection into the aditus by means of Hartmann's canula, after clearance of the tympanum, gives rise to the

expulsion of a fresh quantity of pus; or if a fistula leading to the antrum opens on the outer surface of the mastoid, or on the posterior wall of the meatus; or, finally, if the evidences of mastoiditis present themselves externally. The operation is practised according to Zaufel's method—that is to say, if the antrum is opened in the first place, and if the opening is carried on to the attic, first by means of the gouge, and later with the cutting bone forceps. It is necessary to remove as completely as possible the osseous crest between the tympanum and the antrum, always taking care to preserve the casing of the facial nerve. As regards the method of cutting the posterior wall of the membranous meatus, Dr. Luc has given up Stacke's mode, and employs Zaufel's. As soon as the postero-superior portion of the circumference of the orifice of the osseous meatus has been exposed by the elevator, he incises the postero-superior half of the membranous meatus at right angles to its length and at the level of the point of entrance into the bone; then, by means of a bistoury and a dissecting forceps, he resects completely the postero-superior part of the periosteum of the osseous meatus. When once the cavities of the middle ear have been freely opened and curetted, the essential part of the operation is finished; but it remains to be decided as to whether the opening is to be maintained temporarily or permanently, or whether immediate closure of it is to be sought for.

In three cases the antrum, which was enormously enlarged by the destructive action of the disease, occupied almost the whole of the mastoid, so that after the opening had been made there was behind the ear an enormous cavity, which would never have filled up, and which it was impossible to plug in all its extent through the auditory meatus. This was just the case for the employment of the method proposed by Siebenmann and other German otologists for the maintenance of a permanent orifice, and for the hastening of the epidermization of the walls of the cavity by the application of cutaneous flaps on the margins of the osseous opening. In two of these cases the superior and inferior flaps were made according to Kretschmann's method, but these were too small to enter for any great distance into the osseous orifice. In the third one a single triangular flap was cut with the base downwards, and of twice the length of these. In general, when there is a tendency to the formation of pearly cholesteatomatous scales, the opening in the meatus alone is insufficient, and a permanent retro-auricular opening is required. The drawback to this is the disfigurement, to which some patients object and may refuse to submit to. In such cases it must be clearly explained to them that the period of repair would be much longer and the chances of recurrence much greater. If, on the contrary, the mastoid cavity is only of moderate size and contains few pearly scales or none, and at the same time the auditory meatus is a wide one, it is justifiable to substitute at the proper time drainage by the meatus for that by the wound, and this is, in general, the most usual course of events.

When the mastoid cavity is extremely small, and the auditory meatus unusually large, it would appear reasonable to close the retro-auricular wound at once, and to practise exclusively from the commencement the dressings through the meatus. The first dressing may be kept *in situ*

for a week provided that the temperature shows no disturbing elevation, but Dr. Luc's experience would lead him to prefer a daily change of the dressing. When once, on the removal of the gauze, the surface appears quite dry, it is sufficient to dust it with iodoform, pure or mixed with boric acid, and to introduce a fresh strip of gauze. If, on the other hand, there remains in one of the anfractuositities of the wound a little thick pus or a film of gauze, it is advisable to syringe the cavity by means of tepid water simply boiled or containing boric acid in solution. There appears to be no objection to syringing as long as the osseous breach extends thoroughly to the antrum. When the suppuration becomes very slight, then the dressings may be less frequent, and the iodoform may be replaced by boric acid or salol. As regards the question of duration of treatment, the most important element is the extent of otitis and of the consequent osseous opening; and, next, the nature of the pathological products, the pertinacity and tendency to recurrence of cholesteatomatous masses being kept well in mind, although the method of transplantation of flaps has considerably modified the unfavourable prognosis connected with these, so that healing may be brought about in a period varying from ten to sixteen weeks. If, on the other hand, the osseous lesion is a small one, and the operative interference of slight extent—more especially if the retro-auricular wound is allowed to close immediately or soon, and the auditory meatus of considerable size—a shorter time is required. Finally, the general condition of the patient must be taken into consideration, vigorous patients recovering quicker than those that are more feeble.

Dr. Luc frankly admits that he has not been able to obtain healing within from four to eight weeks, as Lindt, of Berne, professes to do, and he feels quite satisfied if the suppuration is brought to an end in nine weeks. He finds that his results are better and more rapid as his experience of the operation becomes more mature, and he gives a detailed account of fourteen successive cases, with a most conscientious description of points of failure as well as of success.

Dr. LUBET-BARON considered that the performance of the operation was less difficult than the carrying out of the subsequent dressings. In general he agreed with Dr. Luc, but he had found on two occasions that complete success was obtained by the performance of Stacke's operation without opening the antrum; and this method he considers justifiable when the lesion is of old standing, the posterior wall of the meatus healthy, the discharge small in quantity, headache absent, and every reason to suppose that the disease is limited to the attic. He avoids the use of cutting forceps, preferring the gouge, and using Stacke's protector. The retro-auricular opening should be kept free in all cases of cholesteatoma; but, if necessary, all dressings may be practised through the meatus, if this latter is completely eradicated by the operation, so that the communication with the mastoid cavity is made a very large one.

Dr. WEISSMANN asked if Dr. Luc had always investigated the condition of the aditus after practising Stacke's operation.

Dr. LUC replied that that was very difficult.

Dr. MOLL had adopted Zaufel's proceedings, which did away with the necessity for any plastic surgery. He removed the posterior and

superior part of the external auditory meatus. He considered that it was never right to close the retro-auricular wound immediately after the operation, because it was necessary to examine the cavity produced and to plug it well with iodoform gauze. This gauze was to be renewed at the end of eight days, and he had frequently seen, after a few dressings, the wound becoming epidermized, and then closing rapidly, and even too rapidly.

Dr. LUC finally insisted on the necessity of a wide resection, without scruple regarding post-operative disfigurement of the ear and of the meatus.

Statistics of the Hearing Power in the Primary Schools of the Arrondissement de St. Jean d'Angely. By Dr. JOUSLAIN (Paris).

The only method employed was the watch tick. The total number of children examined between the ages of five and fifteen was 2072, and the results were as follows :—Very deaf (watch from zero to fifty centimètres), 257—ten per cent. ; slightly deaf (watch from fifty centimètres to one mètre), 394—nineteen per cent. Differences arose according to the kind of watch employed. These investigations were made by schoolmasters, and instructions were given how to carry them out.

A New Method of Administering Bromide of Ethyl in Oto-Rhinology. By Dr. TEXIER.

He considers this drug, as compared with chloroform, free from danger, rapid in action, and permitting of operating with the patient in a sitting posture. The classical method of administration is *en masse*—that is to say, from five to thirty grammes on the flannel face-piece all at once, from one to two minutes being the time required for complete anæsthesia. He recognizes that this method is not free from danger, and that cases have occurred in which death has taken place from apnœa and syncope, due to the action of the drug on the medulla oblongata. In order to avoid danger he administers the bromide for a time sufficiently short, and in a dose sufficiently small, to obtain cerebral inhibition before the medulla is affected—a condition to which he gives the name of “*apsychia*.” To obtain this result he gives from three to five grammes (at once) to children from three to eight years of age, and five to ten grammes to those between eight and fifteen. The time necessary varies from fifteen to thirty-five seconds, and in no case ought this limit to be exceeded. This allows of from thirty to forty seconds for operation, and permitting, therefore, of the removal of adenoids, or of tonsils, or of aural polypi, or the performance of paracentesis of the membrana tympani.

The contra-indications are tuberculosis or congestive affections of the lungs, and congenital and valvular affections of the heart ; also Bright's disease. As relative contra-indications may be enumerated certain nervous states, such as taciturnity, depression of spirits, or dread of the operation.

A Case of Double Otorrhagia in the Course of Typhoid Fever. By Drs. DAUNIC (Toulouse) and MOLINIÉ (Marseilles).

About the seventh day of the fever the patient, a child aged six, fell out of bed and bruised the face slightly. On the evening of the next day

there was a discharge of blood from the left ear, and on the following day again from the right one. On examination the surface of the membrane was found covered with coagulated blood. Two days later the blood was syringed out with warm water, found to be perfectly pure, and by bacteriological examination found to be free from any pus microbes, so that the idea of suppurative otitis could be completely eliminated. After a few days a nasal hæmorrhage took place. Ultimately the patient recovered, and the membrane was found to be perfectly whole. The authors look upon it as being a simple myringorrhagia.

Dr. GELLÉ recalled a case in which a considerable amount of blood was lost from the ear, the nose, and the mouth. It came entirely from the middle ear, and escaped through a perforation and down the Eustachian tube.

Dundas Grant.

ETIOLOGY of the LOCALIZATION of INFLAMMATORY PROCESSES in the TEMPORAL BONE,

In their RELATION to the ANATOMICAL DEVELOPMENT of the BONE.

By Dr. LUBET-BARON Paris).

Read before the International Congress of Otology, Florence, 1895.

THE cranial bones of the lower vertebrates correspond each to a centre of ossification. It is not the same in the higher ones, and particularly in man; there are several points of ossification for one bone, and their coalescence takes place so completely that in the adult the number of cranial bones is less than of centres of ossification. Thus, the temporal bone develops out of three centres—one for the squamous part, one for the petro-mastoid, and one for the tympanic. These three parts, developed severally in the fœtus, are very loosely cemented at birth, and, with few exceptions, are intimately welded within the first few years of life. It is generally very difficult in the adult to find traces of these primitive divisions.

However, Kirchner, Kiesselbach, and Bezold have frequently noted the persistence of the petro-squamous suture. We can see, then, even from the anatomical point of view, that there persists in the adult something of the fœtal state; but it appears that this perpetuation of the fœtal condition is still more marked from the pathological point of view, and that very often in osteites of the temporal bone, more especially those which appear to be spontaneous, the inflammation is localized, and limits itself to one or other of these portions.

We have thus a means of classifying the osteites of the temporal bone, and we ought to take care not to use the term "mastoiditis" in every case where there is an abscess and a trepanation. If, indeed, we contented ourselves in every case with opening the mastoid, we should often carry out illusory operations, and generally incomplete ones, because the

inflammation, though often limited to the mastoid, may in reality affect the squamous portion of the tympanic portion, and often be limited to that.

There is, therefore, some reason for the view that pathology shows a certain relation of continuity with the primitive anatomical divisions. The temporal bone may have only one of its parts undergoing pathological disturbance independently of the others. This localization is exceptional, and the cases are rare in which intervention has to be limited to one of these parts. Most frequently in chronic cases the affection is situated at the point of coalescence of the three divisions of the bone at the level of the antrum. It is to this that we ought, in the first instance, to direct our energies, in order to work from that point downward and backward toward the mastoid forward, upward toward the squamous, forward toward the tympanic.

Dundas Grant (Trans.).

ABSTRACTS.

DIPHTHERIA, &c.

Atkinson, T. P. (Surbiton).—*Diphtheria and its Causation*. "Lancet," August 31, 1895.

THE author draws attention to deficiency in flushing drains being a possible factor in the spread of diphtheria.

St. George Reid.

Biggs, H. N.—*Antitoxic Serum as a Preventative of Diphtheria*. "Med. News," Nov. 30, 1895.

THE antitoxin used was prepared by the New York Health Department, and the amount used varied from 50 to 600 antitoxin units. These observations seem to show thirty days to be the period of immunization. The following table shows the number, etc., of cases.

	No.	No. of Cases of Diph. div. between 1 and 30 days	Within 24 hrs.	After 30 days.	No. of Cases previous to immunization.
New York Asylum, First imm.	224	1 mild.	0	6	107 in 108 days.
Second imm.	245	1 mild.	0	4	6 ,, 12 ,,
Nursery and Children's Hospital.	130	...	0	0	46 ,, 90 ,,
New York Juvenile Asylum	81	...	0	0	12 ,, 3 ,,
New York Cath. Protect.	114	...	1	0	5 ,, 3 ,,
Bellevue Hospital	11	...	0	0	2 ,, 10 ,,
Health Dept. Insp.	232	1 mild.	3	3	1 or more in each of 90 families.
Total	1043	3	4	13	

R. Lake.

Henry.—*Croup: Prolonged Tubage*. "Bulletin Méd. du Nord," Nov. 22, 1895.

RELATION of interesting case of tubage, where the tube had to be retained in the larynx for months for apnoea without apparent cause. The patient was a

young girl, four and a half years of age, with severe diphtheria; she was the only one left of five children, dead from meningitis or athrepsia, and she had constantly been sickly. Father died of tuberculosis. The bacteriological examination revealed true diphtheria associated with streptococcus. Injections of antitoxic serum; consequently rash and exanthem. During the first days, complete asphyxia occurred when the tube was removed. Subsequently the girl could breathe gently, but after half an hour tubage was again necessary. Later, bronchopneumonia occurred—treated by anti-streptococcal serum; and an abscess arose in the place of injection. The suppuration contained streptococci. Gradual and complete cure resulted without paralysis. The larynx, inspected with the laryngoscope, showed no affection and no paralysis. The tube could not be removed, and at the time of exit from the hospital the tubage was still permanent (from July 16 to November 8).

The author believes the apnoea is similar to those rare cases of impossibility of removal of the canula after tracheotomy, and is the result of nervous hysterical troubles.

A. Cartaz.

Peck, Herbert (Ormskirk).—*The Transmission of Diphtheria by Non-Sufferers*. "Lancet," Dec. 14, 1895.

NOTES of eight cases occurring in four houses about a mile apart, where, after careful inquiry, the disease appears to have been transmitted by one of the inmates who did not himself suffer from the disease.

St. George Reid.

Shuttleworth, E. B. (Toronto).—*Laboratory Notes on the Bacteriology of Diphtheria*. "Lancet," Sept. 14, 1895.

THE author deals with the arrangements adopted at the laboratory in Toronto for bacteriological examination in cases of diphtheria. He draws attention to the important fact that a quarter of the cases admitted to the hospital as diphtheria were really not so, and insists on the necessity of "suspect" wards for doubtful cases.

The organisms present in thirty-two fatal cases were as follows:—

Loeffler's bacillus	37·5 per cent.
„ „ with streptococci.....	25·0 „
„ „ with staphylococci	18·7 „
„ „ with staphylo and streptococci	18·7 „

With regard to the relation between organisms present and the severity of the attack, he finds the most severe cases are those in which the staphylococci are combined with Loeffler's bacillus, and the mildest cases where Loeffler's bacillus is present with both staphylo and streptococci.

St. George Reid.

Symes, J. V. (London).—*Notes on the Bacteriological Examination of the Throat in some Fevers*. "Lancet," Aug. 24, 1895.

THE author publishes the notes of one hundred cases admitted into the London Fever Hospital suffering from scarlet fever, diphtheria, rubeola, etc., where a bacteriological examination was made of the exudation from the throat. In sixty-eight cases of scarlet fever, fourteen showed streptococci, twenty-five streptococci and staphylococci, two staphylococci, one staphylococci and Loeffler's bacilli long, nine staphylococci and Loeffler's bacilli brev., fourteen various forms of cocci and bacilli, and three various forms of bacilli. The bacillus most frequently found was a short, thick bacillus, non-staining central portion liquefying blood serum in three to six days, forming chains or groups. In the case of scarlet fever showing the long variety of Loeffler's bacillus there was rhinorrhœa, but no membrane

could be seen; the pure culture proved virulent to guinea-pigs. The discharge ceased in seventeen days, and a culture showed cocci only; there was no albumen, and no paralysis followed.

In eighteen cases sent in as suffering from diphtheria the long variety of bacillus was present in ten; in two combined with the short (cases one and seven). In case one the short variety was present twelve weeks after admission, but a pure culture was not virulent to guinea-pigs.

In the eight cases where Loeffler's bacillus was not found, five showed streptococci, staphylococci, and cocci; one streptococci and a short liquefying bacillus; and one streptococci and one staphylococci only. In cases one and two there was considerable exudation on tonsils and palate; and case three, where there was an acrid nasal discharge, proved scarlet fever. In none of the cases was there any loss of knee jerk or following paralysis. Five of the above cases were regarded as tonsillitis. In fourteen cases of rubeola, a short liquefying bacillus was found in three, in two of which there was exudation on the fauces; in four staphylococci and the same bacillus; in three strepto and staphylococci; and in one streptococci only. In the remaining three the short diphtheria bacillus was found accompanied by various cocci. In case one, showing bacillus Loeffler brev. and cocci, a pure cultivation proved non-virulent to guinea-pigs. In conclusion the author draws attention to the value of bacteriological examination, and points out that in none of the eighteen cases certified as suffering from diphtheria was the short variety of bacillus found [alone?], and that in the nine scarlet fever and three rubeola cases where it was present only one presented clinically the features of diphtheria. Dr. Washbourne, who had tested pure cultures of the short diphtheria bacillus obtained from some of the above cases, had found them non-virulent to guinea-pigs. *St. George Reid.*

Thresh, J. C. (Chelmsford).—*Infectious Sore Throats.* "Lancet," Aug. 17, 1895.

THE author raises the question as to the infectiousness of some forms of tonsillitis, and the advisability of isolating cases occurring in schools. He draws attention to the low mortality—five per cent.—of the cases of diphtheria occurring in the Chelmsford Rural Sanitary District as compared with previous years, when it has been twenty per cent.; and states that the last thirty cases of diphtheria have all terminated favourably, but that in only one was Loeffler's bacillus found. He believes the bacilli present were the pseudo variety described by Klein.

St. George Reid.

NOSE AND NASO-PHARYNX.

Barr, Thomas (Glasgow).—*The Treatment of Adenoid Growths in the Naso-Pharynx.* "Lancet," Sept. 14, 1895.

THE lecturer deals with the importance of early removal, the modes of operating, and the question of anesthetics. With regard to the latter point, his experience has led him to prefer chloroform, lightly administered, to either ether or nitrous oxide. He emphasized the importance of rest, and the dangers of chill and of any injudicious nasal treatment after the operation. Where the post-adenoid growths are accompanied by hypertrophy of the tonsils, the lecturer is in favour of dealing with the tonsils first, and of removing the adenoid growths at some subsequent sitting.

St. George Reid.

Boyd, Stanley (London).—*Temporary Resection of the Upper Jaw for Naso-Pharyngeal Growth.* "Lancet," Nov. 16, 1895.

At a meeting of the Medical Society of London Mr. Stanley Boyd showed a patient on whom he had performed temporary resection of the upper jaw for removal of a growth in the naso-pharynx. The growth was found to spring from the region of the sphenoidal sinus, and was cut away with scissors. There had been no recurrence.

St. George Reid.

Bowlby, Anthony (London).—*Two Cases of Fibro-Angioma of the Naso-Pharynx Treated by Operation; Remarks.* "Lancet," Oct. 12, 1895.

In the first case of fibro-angiomata of the naso-pharynx the most troublesome symptom was that of persistent epistaxis. After ligaturing the external carotid the left superior maxilla was excised, and the growth separated from the pharynx with a raspator, and torn away from the base of the skull; the bleeding was rapidly arrested by sponge pressure, the skin-flap replaced, and the pharynx and nostrils plugged with iodoform gauze. The man made a good recovery, and no recurrence took place.

In the second case, one of pulsating fibro-angiomata, tracheotomy was first performed, and a Durham's tube inserted. The soft palate was divided in the centre, and together with the muco-periosteum of the hard palate was detached; a triangle of bone, having the apex forward, was then removed from the hard palate, and the tumour, which pulsated freely, was exposed. By means of a large curved steel elevator, passed behind the mass, it was removed in one piece, and the profuse hæmorrhage was arrested by sponge pressure. The man made a good recovery, and three months after the operation it was found that bone had been reproduced along the entire cleft. Twelve months after the operation the man was in good health, with no sign of recurrence of the disease.

St. George Reid.

Broca.—*Adenoid Vegetations of the Naso-Pharynx.* Neuvième Congrès français de Chir., Oct., 1895.

THE author has removed more than five hundred adenoid tumours. In children below one year of age he uses forceps; in others, Gottstein's curette. He does not believe these tumours are so frequently tuberculous as Dieulafoy has stated; the results by inoculation are due to inoculation by infectious mucous at the surface of the tumours. Recurrence is due to increase of parts not removed.

A. Curtaz.

Brunschwig.—*Foreign Bodies in the Left Maxillary Sinus.* "Ann. des. Mal. de l'Oreille," etc., Aug., 1895.

A YOUNG man, who after having had a left molar extracted, felt an opening at the root of the tooth, which the dentist informed him had been an abscess, constantly tried to probe it with straws, cherry stalks, splinters of wood, etc. The author irrigated the sinus freely, removing a quantity of *débris*, amongst others pieces of wood a centimètre in length and diameter. Under constant applications of boracic acid the *ozæna* and discharge were cured. A caoutchouc plate was fitted so as to close the orifice of the sinus. The author concludes as follows: "In the case of foreign bodies in the maxillary sinuses removal should be accomplished as soon as possible, the cessation of suppuration being thereby obtained. An extensive irrigation should be immediately practised. If the foreign body cannot be expelled by the natural orifice of the sinus or by the orifice made, it is better to enlarge the alveolar opening than to make a new opening across the canine fossa. In this manner the condition of the sinus can be easily ascertained

and the foreign bodies can be easily seized. A small cataract crochet or a looped wire is the best instrument." *Norris Wolfenden.*

Collier, Mayo (London).—*Trigeminal Neuralgia and Nasal Disease.* "Lancet," Aug. 31st. 1895.

TWO cases of long-standing severe trigeminal neuralgia, where, on examining the nasal cavities, extensive disease of the middle turbinated bone was found, the removal of which resulted in complete cure in both cases. *St. George Reid.*

Collier, Mayo (London).—*The Effect of Chronic Nasal Obstruction on the Growing Skulls of Young Persons.* "Lancet," Nov. 9, 1895.

IN a letter to the editor the writer calls attention to the irreparable damage done to the growing upper maxillary bone, and consequently to the facial appearance, of young persons the subject of chronic nasal obstruction. *St. George Reid.*

Dalby, Sir Willam (London).—*Adenoid Growths in the Pharynx.* "Lancet," Nov. 30, 1895.

THE author in this paper refers to the use of the steel nail in the removal of adenoid growths, and advocates its use in all cases above the age of eight or nine years. He believes that after this age in many cases the growths become of such tough consistence that it is impossible to eradicate them effectually with the simple finger-nail, especially in those cases where there is hypertrophy of the pharyngeal tonsil; and draws attention to the proper position the patient should be placed in to avoid the blood flowing, or being drawn into the larynx during anaesthesia.

St. George Reid.

D'Aubnay, Richard.—*Primary Chancre of the Nose.* "Ann. de Dermat.," VI., No. II. 1895.

DESCRIPTION of a case of nasal chancre, in the median part of the apex of the nose. At first the diagnosis was difficult, the ulcer having the appearance of a furuncle; the adenitis appeared later. Nothing particular distinguished the evolution, except intense cephalalgia. *A. Cartaz.*

Hassell, R. F.—(1) *Superfluous Tooth in Floor of Nose*; (2) *Rhinolith.* "New Orleans Med. and Surg. Journ.," Nov., 1895.

(1) THE patient, a man of thirty-four years, had suffered from catarrh, paroxysmal neuralgia starting from the right nostril, and occasional fetor of breath. A small-sized canine tooth was removed from the floor of the nose, with entire relief to the patient. (2) A rhinolith in a girl of five: a thin calcareous crust around a roll of paper. *R. Lake.*

Joachim, O.—*A Superfluous Tooth in Floor of Nose.* "New Orleans Med. and Surg. Journ.," Nov., 1895.

THIS was of the incisor type. The only symptom was excessive discharge. The tooth was carious, and was situated well back in the nose. *R. Lake.*

Joachim, O.—*Acute Empyema of Frontal Sinus; Death.* "New Orleans Med. and Surg. Journ.," Nov., 1895.

THE patient received a blow on the head, causing concussion, in the early part of the year. Constant headache next occurred, and he was admitted into hospital after four days' headache and fever; a frontal abscess was opened, and the following day the frontal sinus cleaned out, it being full of granulation

tissue and pus. Some days later the boy was trephined for cerebral symptoms, with a negative result; but pus was obtained the next day through a fresh opening. Death occurred two days later. A frontal abscess and signs of old mischief over frontal lobe found at autopsy.

R. Lake.

Jormeseo.—*Total Rhinoplasty.* Neuvième Congrès français de Chir., Oct., 1895.

THE author has performed rhinoplasty by the Italian method for an enormous acneiform hypertrophy of the nose in a young man twenty-five years old. The graft was detached from the arm, fixed upon the nose, after decortication, and the arm immobilised to the head by a plaster bandage. Good results followed.

A. Cartaz.

Jourdran.—*A Case of Unities Vorus observed in Guyane.* "Arch. de Méd. Navale," Nov., 1895.

DESCRIPTION of a case of unities in a negress in French Guyane. Habitual symptoms: cephalalgia, violent pains, fetid suppuration, discharge, epistaxis, etc. Cure with injections of chloroform water, tobacco, sublimate, and chloroform inhalations. The number of larvæ expelled from the nasal fossæ was more than three hundred (315).

A. Cartaz.

Gradenigo.—*A Case of Rhinolith.* "Ann. des Mal. de l'Oreille," etc., Sept., 1895.

THE rhinolith, which was a cherry-stone encrusted with salts, measured in millimètres 11 by 10 by 9, and weighed 0·645 grammes. The woman, who was thirty years of age, had no recollection of how the stone had got into her nose. It had probably been there since childhood.

Norris Wolfenden.

Guinard.—*Extraction of a large Sequestrum from the Nasal Fossa. Rouge's Operation.* "Ann. des Mal. de l'Oreille," etc., Sept., 1895.

THE case was one of extensive syphilis of the nose, and the sequestrum removed was composed partly of the septum and largely of the palatine apophysis of the superior maxilla, surrounded by an extraordinary quantity of pultaceous matter. The right maxillary sinus was similarly filled. The sequestrum had the size and shape of a two-franc piece. No cicatrix is visible on the face. The author remarks that the sequestrum might have been removed by a median rhinotomy or through a palatine opening; but in similar cases he gives the preference to an operation which is not followed by a cutaneous cicatrix, and prefers Rouge's operation, which is not followed by any external cicatrix, and has only one inconvenience, namely, abundant hæmorrhage, which, however, is easily arrested. It gives extensive access to the nasal fossæ, and permits of ready exploration of the maxillary sinuses.

Norris Wolfenden.

Launois.—*The Nervous Apparatus of Olfaction.* "Ann. de l'Oreille," etc., July, 1895.

A PHYSIOLOGICAL study of the extra and intra-cranial olfactory apparatus, which, though interesting, contains little which is new.

Norris Wolfenden.

Laurens.—*Relations of Diseases of the Nose and Accessory Cavities to Ocular Diseases.* "Gaz. des Hôp.," 7th Sept., 1895.

ANALYTICAL and very good critical review.

A. Cartaz.

Oppenheimer, S. — *Advocation of a New Operation for Marked Diffuse Cartilaginous Deflections of the Nasal Septum.* "Annals of Oph. and Otol.," Oct., 1895.

THE cartilaginous septum is separated at its attachments on all sides except the upper, and is then kept in place by splints. *R. Lake.*

Péan. — *A Case of Rhinoscleroma.* "Bull. Acad. de Méd.," Oct. 22, 1895.

THE case of a woman, a native of Costa Rica, twenty years old, with an old rhinoscleroma, which had invaded the accessory parts of the nasal fossæ. The nose was in great part surrounded by dense, lardaceous neoplasm; the nasal fossæ were completely obstructed by the extension of neoplasm; the upper lip was also degenerated. The rhinoscleromatous degeneration had diffused through the maxillary and ethmoidal sinuses. By extensive operation the author removed the nose and all of the upper lip, and the turbinated bodies; resecting the ascending part of the maxillary bone, and curetting the sinus and antrum. By approximating the edges of the cutaneous flaps there remained only a large hole in the place of the nose. Subsequently cauterization of some suspicious parts was performed with Canquoin's paste. *A. Cartaz.*

Pinder, George (Ramsay, Isle of Man). — *A Case of Empyema of the Antrum of Highmore of Seven Years' Duration.* "Lancet," Oct. 19, 1895.

THE case was one of a man, aged thirty-four, who complained of a constant purulent offensive discharge from the left nostril. On examination the septum and left middle turbinal bone were seen to be studded with small sessile polypi, and pus was oozing from the middle meatus. Two decayed left upper molars were extracted and two holes drilled into the antrum, one over the second molar and the other through the canine fossa. A pyogenic membrane, forming a complete coat of the antrum, was syringed out, together with a quantity of pus and carious material; the nasal polypi were removed and their bases cauterized. The man made a perfect recovery.

St. George Reid.

Richardson, C. W. — *Double Pedunculated Myxo-Fibroma.* "Annals of Oph. and Otol.," Oct., 1895.

THE growth was a naso-pharyngeal polypus, and one peduncle was attached just above the right Eustachian tube; the other, the larger, was attached to the left vault. The microscopic examination showed the tumour to be chiefly fibroma with a little myxomatous tissue. *R. Lake.*

Royet. — *Coryza with Erythema of the Upper Lip.* "Lyon Médical," Nov. 10, 1895.

DESCRIPTION of cases of coryza in three sisters, with secondary erythema in all three patients of the upper lip, near the opening of the nasal fossæ. The author believes that the erythema was of contagious nature, but he has not practised bacteriological examination. *A. Cartaz.*

Rudaux. — *Empyema of the Maxillary Sinus in a Child Three Weeks Old.* "Ann. des Mal. de l'Oreille," etc., Sept., 1895.

IT is generally supposed that maxillary sinusitis is not found before the seventh year of age, and can only frequently occur after the age of puberty: the case recorded is, therefore, most exceptional. Three weeks after birth the infant's eyelids were red and cedematous; there was thrush on the mucous membrane of the mouth and gums, and over the canine fossa could be seen the premature eruption

of a tooth, which was quite loose. A few days afterwards pressure on the sub-orbital region led to discharge of pus through the left nostril, and nasal suppuration became continuous and abundant. Five days afterwards this opened below the lower eyelid, and an abscess appeared behind the left ear. The left cheek was indurated, and an irrigation through the sub-orbital fistula was exuded through the left nostril. With a probe several denuded rugous spots were detected in the upper maxilla. A small curette was introduced through the fistula into the maxillary sinus, and some small osseous sequestræ and a movable tooth were withdrawn. The fistula's track was curetted and packed with iodoform gauze. Irrigations were ordered, but, as the suppuration did not cease entirely, further operation was determined upon. By a horizontal incision in the orbito-palpebral cleft and a vertical incision in the naso-genial cleft, the flap was turned on one side and the sinus entered after resection of a small piece of bone. A large communication was made between the sinus and the nasal fosse, the walls curetted, and the cavity packed. The fistula healed. Five months afterwards (March, 1895) only a very slight nasal discharge remained.

Norris Wolfenden.

Straight, H. S.—*Headache due to Adenoid Growth.* "Med. News," Nov. 9, 1895.

THE patient's headache commenced on rising, and lasted until the forenoon, often causing vomiting. He had nasal catarrh of three years' standing. Adenoid vegetations were found and removed, the headache promptly disappearing and not returning.

R. Lake.

Tidey, Stuart (Florence).—*Septic Tonsillitis as an Acute Specific Disease.* "Lancet," Dec. 14, 1895.

THE writer, from some years' experience in Switzerland, believes that the above form of throat disease should be regarded as an acute specific disease, due to inoculation of a specific poison, the origin of which is intimately connected with defective sanitation. He advocates local cleansing of the fauces and naso-pharynx with antiseptics, and recommends the application of glycerine and carbolic acid.

St. George Reid.

Tilley, Hubert (London).—*Three Cases of Parosmia; Causes, Treatment, etc.* "Lancet," Oct. 12, 1895.

IN all three of these cases the nasal cavities and mucous membrane were found perfectly healthy. The first, that of a man aged thirty-eight years, who complained of a strong smell of ammonia, was evidently one of post-influenza neurosis. The origin of the disease in the second case, that of a man aged thirty-six, was obscure. In both these cases an intra-nasal spray of liq. strychnia, ten minims to the drachm, daily, proved satisfactory. The third case, that of a woman aged forty-six, who complained of having a foul smell in the nose, was evidently one of climacteric neurosis, and improved under general treatment.

St. George Reid.

Vacher.—*Notes on some New Instruments.* "Ann. de l'Oreille," etc., July, 1895.

A DESCRIPTION of handle-carrying curettes for adenoid vegetations, a new polypus forceps, a new aural and nasal speculum, and a new tongue depressor for employment when operating on adenoids; also of a new retro-nasal canula.

Norris Wolfenden.

MOUTH, TONGUE, PHARYNX, &c.

Hulen, V. H.—*Cavernous Angioma of Tongue.* "New York Med. Journ.," Oct. 26, 1895.

THE reporter was only able to find thirty-two recorded cases of vascular tumour of the tongue. The patient, a woman of forty, had had the tumour twenty years when it was accidentally discovered, and now found it an impediment in fitting in some false teeth.

R. Lake.

Lapaille.—*Congenital Perforation of the Pillars of the Fauces.* "Journ. de Méd. de Bordeaux," p. 567. Dec. 8, 1895.

IN a tuberculous patient the author noted a congenital perforation of the left posterior pillar. The hole is perfectly round, half a centimètre in diameter, and without alteration of the mucous membrane.

A. Cartaz.

Ray, D.—*Lymphoid Hypertrophy at Base of Tongue in Singers.* "Med. News," Oct. 25, 1895.

THE author finds this a more common source of trouble than lingual varix, and quotes some illustrative cases, giving the following as usual symptoms:—

1. Sensation as of foreign body in throat not relieved by deglutition.
2. Sensation of constriction around throat at level of upper border of thyroid.
3. Occasional reflex irritable cough.
4. Constant endeavour to clear throat.
5. Quick laryngeal fatigue.
6. Occasional hoarseness.

Galvano-cautery and cold wire snare were used in the quoted cases. *R. Lake.*

Ripaüt.—*A Case of Ludwig's Angina.* "Ann. des Mal. de l'Oreille," etc., Sept., 1895.

THE cervical cellulitis was caused by dental caries. The course of symptoms was extremely rapid, the infiltration of the soft parts being almost doubled in a few hours. Urgent dyspnoea necessitated tracheotomy. The trachea was calcareous. The tongue was enormously swollen. The symptoms persisted for several weeks after the evacuation of the pus, and there appeared to have been a second purulent collection, which opened spontaneously into the mouth.

Norris Wolfenden.

Sanit, Philippe.—*Statistical Results of Serum Treatment in the Children's Hospital.* "Journ. de Méd.," Bordeaux, Nov. 30, 1895.

THE success of serum treatment in the author's practice has been very remarkable. In the first three months of 1895, 65 cases of diphtheria have been treated by antitoxic serum; 13 times tracheotomy had to be practised. Of these 65 cases only six died.

In the second quarter of the same year, 55 cases, with six tracheotomies and no deaths. Total, 120 cases of diphtheria, with six deaths. Every case was submitted to bacteriological examination, and the diagnosis of diphtheria was absolutely correct. This percentage is the consequence of antitoxic injections. *A. Cartaz.*

Terry, John.—*Sore Throats in Influenza; the Tongue as an Aid to Diagnosis; the Difficulties of Differential Diagnosis.* "Lancet," Oct. 12, 1895.

THE author draws attention to a peculiar condition of the tongue he has noticed in cases of influenza: the appearance of dark, purplish-red spots scattered over the

anterior half of the dorsum, about the size of a pin's head, becoming white and vesicular later on; the latter he has also noticed on the inside of the mouth and soft palate. He refers to the bacteriological examination in cases of diphtheria, and is of opinion that microscopic and culture evidence cannot be relied on without confirmation by means of inoculation.

St. George Reid.

Troquart.—*Two Cases of Adeno-Phlegmon of the Neck secondary to Angina.* "Journ. de Méd.," Bordeaux, June 9, 1895.

RELATION of two cases of extensive suppurative adenitis, after an acute angina. In the first case the patient, a lymphatic subject, had had a catarrhal sore throat, and during convalescence, twelve days after the beginning of the disease, there appeared a large abscess in the cervical lymphatic glands. The second case is similar.

A. Cartaz.

Vergely.—*Pharyngeal Angina caused by Influenza. Cervical Suppurative Adenitis.* "Journ. de Méd.," Bordeaux, Nov. 3, 1895.

A MAN, forty years old, had influenza and acute sore throat, with a slight adenitis of the cervical lymphatic glands. After a short journey there was sudden increase of the feverish state, then sore throat and adenitis. A large phlegmonous abscess of the neck appeared in the sub-clavicular region; another, some days after in the cellular tissue of the sterno-mastoid muscle. There was rapid recovery after opening of the abscess.

A. Cartaz.

LARYNX. TRACHEA. &c.

Bédos.—*Laryngeal Ictus.* "Thèse de Paris," 1895.

A CRITICAL review of the principal symptoms of this curious affection. The author believes ictus to be the result of inhibition of the nervous centres through laryngeal reflex action. This inhibition is greatly facilitated by anemia of the centres, a consequence itself of emphysema and crisis of coughing. The pamphlet gives an analysis of forty-three observations.

A. Cartaz.

Corradi.—*Considerations upon Stenoses of the Larynx; a New Method of Dilatation.* "Ann. des Mal. de l'Oreille," etc., Sept., 1895.

THE author discusses the disadvantages of the ordinary tracheal canula, the fenestrum of which is placed in an irrational position: if not actually provoking a stenosis, these canulas may favour a tendency to their production. The fenestrum is placed more behind than it ought to be, so that in infants especially, it cannot correspond to the inferior opening of the larynx. A slight degree of swelling of the laryngeal mucosa obliterates the opening. Air does not pass through the larynx, and the laryngeal condition is unfavourably affected, the conditions all favouring stenosis; and stenosis is also favoured by too large a canula. As to the different methods of treatment of laryngeal stenoses, the author has applied laminaria cylinders, a method which he believes to be new as regards the larynx. He thinks Schrötter's method is complicated and requires great assistance from the patient, and other methods of dilatation are unsatisfactory. The pressure of laminaria is exerted in all directions equally, and it does not produce injuries and abrasions, as are caused by metallic and hard substances. Greater objections apply to bivalve dilators. The author's laminaria cylinders are graduated in series according to size, are two to three centimètres long, and are introduced from below

upwards. The method of introduction is by passing a threaded bougie through the tracheal opening into the mouth, one end of the thread being left outside the mouth. The bougie is withdrawn again with the thread through the tracheal opening. To this is attached a laminaria cylinder, which is drawn up into the larynx. The lower end of the cylinder has a thread which attaches it to a little hole in the bend of a specially constructed canula. The lower thread is then attached round the neck, having had two or three turns round a small button on the upper part of the canula, which thus renders it immovable. When removal is desired this is effected through the mouth by cutting the lower thread. Dilatation by this means is very well borne by the patient. In the intervals between the different applications of the laminaria tents a soft gum tube is introduced into the larynx in the same manner. The author's method of dilatation is also applicable to stenoses consecutive to adhesions of the palate.

Norris Wolfenden.

Griffin, H.—*Condylomata of Trachea.* "New York Med. Journ.," Nov. 16, 1895.

THE patient, a woman thirty years of age, who had had syphilis eight years before, presented herself for treatment for dryness and irritation of her throat, and dyspnœa. Her neck was enormously swollen and tender. In the trachea a growth was seen close below the cords, red in colour, covered with pultaceous secretion, and fissured; it was attached to the anterior two-thirds of the tube. The patient was cured in three weeks by the internal administration of pot. iod. $\frac{3}{4}$ iv. daily, and the external use of ung. hyd. ox. rub.

R. Lake.

Levi and Laurens.—*Acute and Primary Laryngeal Œdema.* "Arch. Gén. de Méd.," Dec., 1895.

THE patient, thirty-four years of age, was admitted into the hospital for intense dyspnœa with cyanosis, after slight irritation of the fauces. A month before the patient had a cold with great prostration, but gradual recovery followed. The recent disease appeared two days before entrance into the hospital. Temp., $38^{\circ}4$; no albumen in the urine; no inflammation on the fauces; the tonsils, soft palate, and pharynx were normal. In the larynx was œdema of the epiglottis and aryteno-epiglottidean ligaments. With the application of leeches to the front of the neck there was diminution of the dyspnœa and laryngeal troubles, and complete cure.

The authors believe that the œdema was of infectious origin. *A. Cartaz.*

Thompson, A. S.—*Sarcoma of Larynx. Laryngectomy by an Improved Method.* "Med. News," Oct. 26, 1895.

THE patient, a man of thirty-five years, was first seen on June 20, 1895. A large pink lobulated tumour filled the glottis. Hoarseness and dysphagia were present, and the tumour could be felt externally; symptoms had only been marked for four months. Anti-syphilitic treatment failed to produce any beneficial result. At the operation the crico-thyroid articulations, thyro-hyoid and crico-thyroid membranes were first divided; next, the superior thyroid cornu; the arytenoids disarticulated and the larynx removed. The inferior constrictors were sewn together in such a way as to make a continuous passage to the œsophagus. These did not unite primarily, and the patient was therefore fed by a tube for five weeks, when secondary union occurred.

R. Lake.

Mackenzie, Hunter.—*A Case of Cystic Tumour of the Larynx.* "Lancet," Dec. 7, 1895.

THE case was one of a man, aged sixty-seven years, who complained of difficulty of breathing. On laryngoscopic examination a pear-shaped tumour was seen

lying on the left vocal cord and left ventricular band; it was attached by a short pedicle at or near the anterior commissure, and extended as far as the left arytenoid cartilage. The tumour was removed with the rectangular forceps, with immediate and complete relief. After its removal the left vocal cord was found to have disappeared, probably from the pressure and erosion of the tumour.

St. George Reid.

Mandelstamm. *A Case of Hysterical Aphonia.* "Ann. des Mal. de l'Oreille," etc., Aug., 1895.

A CASE of adductor paralysis in a woman.

Norris Wolfenden.

Morgan, J. H. (London).—*A Case of Foreign Body impacted for Forty-six Days in the Left Bronchus; Operation; Recovery.* "Lancet," Sept. 28, 1895.

THE lecturer first drew attention to the various substances which may pass into the respiratory tract, and their mode of entrance; to the necessity of consideration on the part of the surgeon as to the further changes which may occur in the nature of the substance, and as to the position it may be arrested in. The case in point was one, under the care of Dr. Mitchell Bruce, of a girl, aged eight years, who drew a portion of a plum-stone into the respiratory tract: paroxysmal cough was the prominent symptom. On admission into the Great Ormond Street Hospital for Sick Children, three weeks after the accident, the left side of the chest was seen to be flattened, chiefly over the second and fifth ribs, with deficient movement, the interspaces being sucked in during inspiration. The whole of the left side of the chest was dull, excepting over the left of the sternum, the dulness extending over the left lung posteriorly. Eight days after admission the trachea was opened by an incision extending from below the third and fourth rings to well above the level of the isthmus, but although the foreign body could be felt in the left bronchus it could not be removed. A good deal of cough and mucopurulent expectoration followed the operation. A fortnight after the first operation a second attempt at removal was made; the foreign body could be distinctly felt about five inches down the left bronchus, and, at length, by means of a long pair of curved forceps, was successfully removed. It proved to be nearly half of a broken plum-stone impacted apex downwards. The child made an excellent recovery.

St. George Reid.

Secrétan.—*Laryngeal Herpes.* "Ann. de l'Oreille," etc., Aug., 1895.

THIS is an acute affection occurring sometimes in healthy individuals as well as in those who have suffered for long with chronic laryngitis; sometimes epidemic, sometimes sporadic. The onset is sudden, with more or less intense fever and shivering; there is hoarseness or aphonia, lancinating pain, and sometimes dyspnoea, with acute inflammation, redness, swelling, or œdema of some portion of the larynx, preceding by a day or two the development of vesicles. These are few—rarely more than a dozen—small, not bigger than a millet seed, and very ephemeral; they leave small erosions covered with a whitish crust, adherent and sometimes hemorrhagic, which falls at the end of five or six days, leaving a simple depression. The laryngeal eruption is sometimes the sole manifestation; at others it is accompanied, preceded, or followed by similar cutaneous or pharyngeal manifestations. Diagnosis is not easy at the onset, and it is most liable to be confounded with diphtheria. The general disseminated distribution of the lesions and the slight tendency to confluence are the chief diagnostic points which can be confirmed bacteriologically. In other cases, more rarely observed, the laryngeal vesicles develop during the course of an acute disease, such as pneumonia, and then have the same significance as labial herpes; the former is "essential," the latter

"symptomatic" laryngeal herpes. Laryngeal herpes is precisely the same in etiology, symptoms, and pathology as the same disorder of the skin. The author has recently seen two cases: the one idiopathic, the other symptomatic—since it preceded a pneumonia. The author suggests that in such cases the infection is caused by the pneumococcus. Many years ago he had seen a case of acute median suppurative otitis which preceded by two or three days a pleuro-pneumonia. In both these cases the local symptoms (laryngeal and aural) subsided entirely on the appearance of the pneumonia. The author gives detailed notes of these two cases.

Norris Wolfenden.

Spengler (St. Petersburg).—*Parachlorophenol in Laryngeal Phthisis.* "Lancet," Dec. 14, 1895.

ADVOCATING the use of parachlorophenol in laryngeal phthisis. Mixed with glycerine in equal proportion, it was found to have marked microbicidal action, and its soothing effect to be more prolonged than cocaine. *St. George Reid.*

THYROID AND NECK.

Bartholow, R.—*Cases Illustrative of the Character and Treatment of Exophthalmic Goitre.* "Med. News," Sept. 16, 1895.

1. PATIENT, a lady of about twenty years. Her symptoms were: exophthalmos, goitre palpitation, and rapid pulse—170. She was cured three years ago by galvano-faradization of the cervical sympathetic and of the pneumo-gastric, and the internal use of duboisin, picrotoxins, and tonics.

2. Patient, a lady aged forty-two, suffered from vertigo, occipital pains, flushings of head and neck, with increased intracranian tension, etc. This case yielded to Barii chlor. liq.

3. A goitre of several years' standing, accompanied by weakness and wasting, rapid pulse, occasional attacks of palpitation, was greatly reduced in size and its symptoms relieved by thyroid extract. *R. Lake.*

Brown, W. H. (Leeds).—*Notes on two Cases of Enucleation of Thyroid Cyst.* "Lancet," Sept. 21, 1895.

Two cases of thyroid cyst occurring in young unmarried women. The cyst was first opened and emptied of its liquid contents by means of a free incision over the tumour, and the cyst wall was then stripped off by means of the finger and a blunt director. Both cases did remarkably well without any important rise in temperature. The author also mentions a case of enucleation of an adenoma of the thyroid gland in a girl of fifteen, where the tumour was without any difficulty detached from its surroundings, the patient making a satisfactory recovery. In operating on these cases he is in favour of a free incision over the tumour, in order to obtain a better view of the wound cavity. *St. George Reid.*

Gayet, G.—*Cancer of the Thyroid, with Extension to the Trachea; Tracheotomy; Death.* "Archiv. Provinciales des Chir.," IV., No. 11, 1895.

THE patient, a man forty-five years old, had recently had (three months ago) the first symptoms of this disease, viz., hypertrophy of the thyroid, hoarseness, and, by degrees but pretty rapidly, complete aphonia, extreme difficulty of breathing, with suffocation and abundant hæmoptysis. Then arose an urgent necessity for tracheotomy. Death occurred two hours after the operation.

At the *post-mortem* examination a colloid cancerous tumour of the left part of the thyroid was found. The neoplasm invaded the lateral parts of the windpipe, œsophagus, carotid and lymphatic glands, and the trachea was perforated with polypoid implantations into the tube. *A. Cartaz.*

Holmes, Gordon (London).—*Sporadic Goitre: its Varieties, and the Results of Modern Treatment.* "Lancet," Nov. 9, 1895.

THE author refers to the history of goitre since the first century; he then deals with its semiology, pathogenesis, pathological anatomy, diagnosis, prognosis, and treatment. With reference to the latter, he believes that injection of the tumour gives the most satisfactory results. In one thousand cases operated on by Kocher the death rate was only twelve per cent. *St. George Reid.*

Marie, P.—*Thyroid Feeding in an Ordinary Bronchocele Goitre.* "Bull. Soc. Méd. des Hôp.," Nov. 8, 1895.

THE author relates the case of a young girl, nineteen years old, having for five years had a bronchocele as large as an orange. Excellent general health. No circulatory or respiratory troubles. Medication by thyroid lozenges, two a day, during twelve days. Some slight symptoms of thyroidism occurred, not resembling those observed in myxœdematous patients. In twelve days the tumour had diminished from eighty millimètres to forty-five millimètres in width, and from fifty-five millimètres to forty in height. *A. Cartaz.*

Morris, H. C. L. (Bognor).—*The Effect of Thyroid Extract in Myxœdema, complicated by Angina Pectoris.* "Lancet," Sept. 28, 1895.

A CASE of a man, aged forty-eight, who had suffered from myxœdema and angina for some years. The thyroid extract had to be discontinued on account of it apparently increasing the severity of the attacks of angina. *St. George Reid.*

Munson, E. L.—*Goitre among the Indians in the United States of America.* "New York Med. Journ.," Oct. 26, 1895.

THIS is an article of great interest on account of its wide scope, no less than 147,873 Indians being included in those reported on: 77,173 were inhabitants of goitrous tracts, in whom 1823 cases of bronchocele were found, or 2·36 per cent. This may be considered a minimum percentage, and the following conclusions are arrived at from the facts quoted:—

1. There is a strong racial disposition to goitre among Indians.
2. That it is a distinctly localized disease.
3. That it does not appear to be caused by high altitudes, climate, or water containing excess of calcium salts.
4. It is favoured by insanitary conditions, constitutional depression, and improper and excessively nitrogenous diet.
5. Hereditary influence is strongly marked.
6. Sex and puberty have a marked influence.
7. Cretinism and Graves' disease are rare; the former the rarer.
8. The tumours are smaller than amongst the whites, and treatment is unsatisfactory. *R. Lake.*

Sutton, Bland (London).—*On a case of Median Cervical Fistula.* "Lancet," Nov. 9, 1895.

THE case was that of a man, a patient in the Middlesex Hospital. The fistula opened in the lower third of the neck in the median line; there was no pain or inconvenience

beyond the persistent flow of mucus. On dissecting it out it was found to pass vertically upwards beneath the deep fascia of the neck to the basi-hyal, the upper end of the duct becoming incorporated with the thyro-hyoid membrane.

St. George Reid.

EARS.

Alderton, H. A.—*Cicatrix of the Membrana Tympani vibrating synchronously with Respiration and Pulse.* "Annals of Oph. and Otol.," Oct., 1895.

THE patient, aged sixty-four, had a cicatrix in the inferior anterior quadrant of the right membrane, which vibrated with respiration after inflation of the tympanum, until the air was exhausted, and after that synchronously with the pulse. The author attributes it to a dehiscence between the carotid canal and the tympanum.

R. Lake.

Armitage, Edward (Hawaii).—*Removal of a large Insect from the Human Ear.* "Lancet," Oct. 12, 1895.

A CASE in which a cockchafer, upwards of an inch long and five-twelfths of an inch broad, was removed from the external meatus. Slight pain and tinnitus, which it had caused, disappeared three hours after its removal. *St. George Reid.*

Bronner, Adolph (Bradford).—*On the Various Methods of Operating on the Mastoid Process and the Indications for the same.* "Lancet," Nov. 9, 1895.

THE author first deals with the dangers of unskilled surgery in this region, and then enumerates the symptoms indicating that an operation is necessary. He refers to the various authorities on the subject, their modes of operating, and the varieties of operation: and concludes by pointing out—firstly, that we should not operate unless acquainted with the anatomy and pathology of the part, and unless we have operated frequently on the dead body; secondly, that cases of persistent chronic otitis media should be carefully examined, and, if necessary, operated on; thirdly, that the use of the gouge or gimlet in operating is dangerous and incomplete; and, lastly, that we should not stitch up the wound, but leave a large opening.

St. George Reid.

Bean, C. E. (Plymouth).—*Otorrhœa, and Some of its Complications.* "Lancet," Nov. 9, 1895.

IN A paper read before the Plymouth Medical Society the author draws attention to the care which should be exercised in minor aural operations as regards anti-sepsis, etc., and refers to the use of cocaine as a hæmostatic. *St. George Reid.*

Buller, F.—*Removal of the Membrana Tympani and Ossicles.* "Montreal Med. Journ.," Oct., 1895.

A REPORT of five cases for an operation in chronic suppurative disease. In three, cured, cessation of discharge took place and hearing was improved, and in others the discharge was lessened and hearing improved in one.

R. Lake.

Burnell, C. H.—*Case of Intra-Mastoiditis, with Burrowing of Pus into Pharynx.* "Philad. Polycl.," Nov. 23, 1895.

THE patient, a man of sixty-two years, had suffered with post-nasal catarrh for four months, when he infected his left tympanum, causing rupture of the drum on

July 4, 1894; subsequent mastoiditis was relieved by Wilde's incision, Oct., 1894. In January, 1895, swelling occurred beneath the left sterno-mastoid, and by distension of buccinators he could force pus out of the ear, and also by pressure over the swelling. The bottom of the abscess was formed by the superior constrictor. The above swelling was incised, January 23, 1895, and when the reporter saw him, February 23, 1895, pyæmic symptoms had set in. By Valsalva's method pus and air could be forced out of the meatus, a perforation in the cartilaginous meatus, and the last-mentioned incision. The removal of this pus enabled the jaw to be shut easily, which had not been the case previously. By freely opening and draining the cavities a cure was obtained.

R. Lake.

Knapp, H. (New York).—*On the Indications for Mastoid Operations in Acute Purulent Otitis Media, with Four Illustrative Cases.* "Arch. of Otol.," Vol. XXIV., Nos. 3 and 4.

WITH cold applications, rest in bed, antiseptic cleansing of the ear, and early paracentesis, urgent symptoms may pass away even when the attic is affected. In the first case this was noticed. In the second and third operation was required. The fourth (influenzal) ended fatally from a relapse, rapid improvement having followed paracentesis. The patient was removed from the writer's further care, and the family practitioner was misled by a history suggesting a tendency to "cerebral attacks." He concludes that no one symptom by itself constitutes a sufficient indication for a mastoid operation—even choked disc—but only the *ensemble* of the symptoms and the course of the disease. He insists that, even if the patient recovers and does well (without operation), he should be kept under observation for weeks and months; and that, whatever the symptoms be, our operative procedure should commence with the opening of the antrum, the remaining interference depending on the conditions coming into view. He quotes Bezold's statistics showing that "about nine per cent. of all cases of acute middle ear suppuration are complicated with such a degree of mastoid inflammation as to make a spontaneous recovery improbable."

Dundas Grant.

Moullin, Mansell (London).—*Three Cases illustrating the More Severe Complications of Middle-Ear Disease.* "Lancet," Nov. 23, 1895.

THREE cases illustrating the results that follow neglected otitis media. In the first case there was acute inflammation of the temporal muscle and of the squamous portion of the temporal bone; the cerebral symptoms were suggestive of intra-cranial suppuration, but were relieved on incising the pericranium and trephining the bone. In the second case there were marked pyæmic symptoms, with paralysis of the external rectus of the opposite eye; the sinus was opened and found full of clot, which was washed out, and the case did well. The third case was one of sinus thrombosis following long-standing otitis media; the mastoid antrum and cells were cleared out and the sinus laid bare, but the man died of pleurisy and pericarditis eight days after admission.

St. George Reid.

Pitts, Bernard (London).—*Otorrhœa; Lateral Sinus Thrombosis; Operation; Recovery.* "Lancet," Aug. 10, 1895.

A CASE of chronic otorrhœa, with acute exacerbation, followed by symptoms of sinus thrombosis. The sinus was found to be filled with purulent clot. The internal jugular was tied at the level of the cricoid cartilage after the mastoid antrum and tympanic cavity had been exposed and scraped out. Recovery was very slow, and broken by four rigors at intervals, the temperature at one time reaching 106°. Two large abscesses formed in the neck and required incision. The patient was

convalescent in about ten weeks after the operation, but there was still slight discharge from the ear and mastoid opening. *St. George Reid.*

Scheibe, A. (Munich).—*Some Tumours of the Ear.* "Arch. of Otol.," Vol. XXIV., Nos. 3 and 4.

FIRST: a *fibroma*, containing all the elements of the skin, excepting sweat-glands, occurring on the medial surface of the tragus. Secondly: a pedunculated *osteosarcoma*, which did not recur after removal, showing the more favourable prognosis as compared with pure sarcoma. Thirdly: three cases of *hairy granulation tumour* in the middle ear. The victim of one of these happened curiously to be the same individual who formed the subject of Weydener's observations ("Fifty-eighth Meeting of Germ. Naturalists and Phys.," Strasburg, 1885, p. 509), which forms the second of the three, the third being that of Kuhn ("Arch. of Otol.," Vol. XIV.). In Kuhn's there were no hair follicles, and therefore the case does not come within the category. In an old specimen of an aural polypus Knapp found hairs present, and found, on searching, the record of a condition of epidermization of the lining of the tympanum—a cholesteatomatous soil—which did not, however, account for the development of the hair. *Dundas Grant.*

Scheibe, A. (Munich).—*Anomalies of Formation of the Membranous Labyrinth in Deaf-Mutism.* "Arch. of Otol.," Vol. XXIV., Nos. 3 and 4.

IN one case there were atrophic changes in the fibres of the cochlear branch occupying the first whorl, the corresponding portion of Corti's organ being reduced to a mere trace; while in the upper whorls it was lower than normal, the membrane being rolled up in the rudimentary way. This and other allied conditions indicated a congenital defect or arrest of development. The other case was described four years ago ("Arch. of Otol.," Vol. XXI., p. 12). In both the osseous capsule was normal. The author finds these observations in accord with Kölliker's description of the development of the cochlea. *Dundas Grant.*

Treitel (Berlin).—*A Case of Multiple Otitic Cerebral Abscess.* "Arch. of Otol.," Vol. XXIV., Nos. 3 and 4.

A MAN, aged twenty-two, with right chronic suppurative otitis media since childhood, complained of severe headache; temperature 100° to 101°; later, diminution of consciousness, slight stiffness of neck, then drowsiness, left facial palsy, coma, and death. On autopsy there was found "an abscess in the lower surface of the right temporal lobe"; also one in posterior portion of the temporal lobe and adjacent part of the occipital, and several smaller ones further back. The entire attic was involved in disease. The obvious difficulties in the diagnosis are discussed.

Out of six thousand autopsies in the Berlin Pathological Institute twenty-one showed cerebral abscesses, seven of which were otitic (one-third of all). All seven were single, except one, in which the second abscess was on the opposite side, and another in which, possibly, the ramifications of the abscess indicated a coalescence of several. Of the fourteen non-otitic abscesses, five were multiple, some pyæmic, and in one case influenzal. Treitel only accepts statistics derived from autopsies, and holds that when a few days after the evacuation of a cerebral abscess recrudescence of symptoms arises and calls for a fresh incision, there has probably been merely retention from cerebral prolapse. *Dundas Grant.*

Turner, F. M. (London).—*A Case of Scarlet Fever; Otorrhœa; Thrombosis of the Lateral Sinus; Pyæmia affecting Right Elbow and Left Hip; Recovery.*

THE case of a boy, aged six years, who developed otorrhœa a fortnight after the appearance of scarlet fever. A rise of temperature was followed by symptoms

of intra-cranial suppuration. The mastoid antrum was opened, and some offensive fluid evacuated from the sigmoid sinus. The jugular vein was not ligatured. Fourteen hours after the operation the right elbow became swollen and painful, followed by pain in the left hip. The elbow was opened by a free incision, washed out with perchloride lotion, and drained. Four days after the hip joint was opened and some turbid fluid evacuated, and an abscess in the right gluteal region opened. The elbow did well, but the hip healed very slowly, a counter-opening having to be made fourteen days after the operation. The mastoid opening healed slowly, some pus having at one time to be evacuated and some dead bone removed. In a little over three months' time it was finally healed. The otorrhoea, however, persisted when last seen, five months after the operation. *St. George Reid.*

REVIEWS.

A B C Medical Diary, 1896. Burroughs, Wellcome & Co.

THIS is the handiest little visiting list and *vade mecum* we have seen. It contains a store of information, and all in the handiest form—poisons and antidotes, tables, equivalents, solubility, size and weights of drops, and other useful and necessary information—and is being presented to all the medical men of Great Britain, India, and Australia.

Clinical Sketches. Ed.: NOBLE SMITH.

THE editor of this enterprising journal is to be congratulated upon its success, and we wish to point out to our readers a few points in connection with the journal. Firstly, the price is reduced to sixpence monthly. It is an artistic as well as a literary journal of very high excellence, giving portraits and replicas of pictures of the utmost interest and of considerable value. In the last number (No. 12, Vol. I.) there is an article on "A Sanitary Garden" of more than usual scientific interest. The clinical sketches are well done and most useful, and fully up to the high standard aimed at by the editor. The portrait of John Hunter in this copy, as a work of art, is above praise.

The Physicians' Visiting List (Lindsay & Blakiston's), 1896. Blakiston & Co., Walnut Street, Philadelphia, U.S.A.

THIS visiting list contains the most useful information it is possible to conceive to aid in the writing of prescriptions, both in the apothecaries and metric system. The book is not made unduly bulky, and is to be highly recommended.

Chemists' Vest Pocket Diary and Ready Reference Book for 1896. Burroughs, Wellcome & Co., Snow Hill, London.

THIS is a handy little reference, carefully compiled to give at a glance any information required.

NEW PREPARATIONS, &c., received.

THE PERFECTED WYETH BEEF JUICE.

(Burroughs, Wellcome & Co.)

To the vast majority of the fluid beef preparations in the market this elegant preparation is far superior, whilst it has points all of which the few really good and reliable ones do not possess. One of these is the presence of the hæmoglobin in a pure state—*i.e.*, as found in the blood. It contains almost forty per cent. organic matter of a highly nourishing and easily assimilable character; it must, however, not be boiled. We can recommend this preparation most confidently for a trial, and feel sure of it obtaining a high place in the opinion of the profession at large.

ADEFOR LANÆ. (Christy & Co., London.)

ANTI-DIPHTHERITIC SERUM TREATMENT CHART.

(Burroughs, Wellcome & Co., London.)

LEWIS'S NURSING CHART. (Lewis, Gower Street, London.)

BIBLIOGRAPHY.

NOSE AND NASO-PHARYNX.

BATUT. De l'opération de Rouge et de ses indications. *Ann. des Malad. de l'Oreille, etc.*, No. 3, 1894.

BÉCO. Les tumeurs adénoïdes du pharynx nasal ou hypertrophie de l'amygdale pharyngienne au point de vue du médecin praticien. Liège, 1893.

COUPARD. Note sur quelques effets du guaiacol synthétique. *Gaz. des Hôp.*, No. 1, 1894.

DELIE. Gouge pour les crêtes de la cloison du nez. *Rev. Internat. de Rhinol.*, etc., No. 2, 1894.

GECHELINE. Cyanidrosis nasi. *Gaz. Hebd. Méd. de la Russie méridion.*, No. 6, 1894.

⚭ GRELLETY. Traitement du coryza. *Gaz. Méd. de Liège*, No. 19, 1894.

GOUREAU. L'antipyrine et l'exalgine dans le traitement des névralgies d'origine nasale. *Actualité Méd.*, No. 2, 1894.

MENDEL. Rhinite syphilitique héréditaire. *Sem. Méd.*, No. 16, 1894.

MOURE. Rhinolithes spontanées; nécessité de pratiquer l'examen histologique et chimique. *Rev. de Laryng., Otol., Rhinol.*, No. 6, 1894.

NATIER. Sur quelques cas de sarcome des fosses nasales. *Rev. Internat. de Rhinol.*, etc., No. 2, 1893.

BEAUCELLIER. Influence des affections nasales sur le tube digestif. *Gaz. Méd. de Picardie*, No. 1, 1894.

RAUGÉ. Sur le rôle normal et pathologique des fosses nasales dans la phonation. *Ann. des Malad. de l'Oreille*, etc., No. 3, 1894.

RIPAULT. Ablation des végétations adénoïdes. *Gaz. Méd. de Paris*, No. 6, 1894.

ROCHARD. Du traitement opératoire des abcès chauds rétro-pharyngiens chez l'enfant. *Médecine Infantile*, No. 1, 1894.

ROUGIER. Des végétations adénoïdes du pharynx par la pharyngoscopie antérieures, et de leur ablation au lacet par les fosses nasales antérieures. *Bull. Méd. et Administratif*, No. 51, 1894.

TISSIER. Des coryzas à fausses membranes. *Gaz. des Hôp.*, No. 33, 1894.

TISSIER. Considérations anatomiques sur l'ozène. *Ann. de Méd.*, No. 5, 1894.

TISSIER. Pathogénie de l'ozène. *Ann. de Méd.*, No. 7, 1894.

HELOT. De l'électrolyse des tumeurs de la cloison du nez et des hyperplasias de la pététaire. *Ann. de l'Oreille*, Mar., 1895.

LERMOYEZ. Technique générale des opérations intranasales. *Ann. de l'Oreille*, Mar., 1895.

RIPAULT. Syphilides nasales végétantes à la période secondaire de la syphilis. *Ann. de l'Oreille*, Mar., 1895.

TISSIER. Le massage vibratoire en rhinologie. *Ann. de l'Oreille*, April, 1895.

LANNOIS. L'appareil nerveux de l'olfaction. *Ann. de l'Oreille*, July, 1895.

HELME. Des adénoïtes. *Ann. de l'Oreille*, Aug., 1895.

FOUGERAY. De l'emploi de l'huile mentholée au 10^e dans les rhino-pharyngites chroniques. *Ann. de l'Oreille*, Aug., 1895.

BRUNSCHWIG. Corps étrangers du sinus maxillaire gauche. *Ann. de l'Oreille*, June, 1895.

GUINARD. Extraction d'un volumineux séquestre des fosses nasales : opération de Rouge. *Ann. de l'Oreille*, Sept., 1895.

KUDAUX. Empyème du sinus maxillaire chez un enfant de trois semaines. *Ann. de l'Oreille*, Sept., 1895.

GRADENIGO. Sur un cas de rhinolithé. *Ann. de l'Oreille*, Sept., 1895.

RIPAULT. Trois cas d'empyème du sinus frontal. *Ann. de l'Oreille*, Nov., 1895.

RIPAULT. Un cas de papillome confluent des fosses nasales. *Ann. de l'Oreille*, Nov., 1895.

FOUGERAY. Un cas de rhinite purulente aiguë primitive infantile à staphylocoques guérie par l'emploi de l'huile mentholée au 10^e. *Ann. de l'Oreille*, Dec., 1895.

RIPAULT. Un cas de rhinolithé. *Ann. de l'Oreille*, Dec., 1895.

ARSLAN. Contribution statistique à l'étude des végétations adénoïdes du rhino-pharynx. *Ann. de l'Oreille*, Dec., 1895.

GOULY. Des corps étrangers du sinus maxillaire, et en particulier de leur élimination par l'hiatus semi-lunaire. *Archiv. de Laryng.*, Jan. and Feb., 1895.

MARION. De cas prothèse dans le traitement des fistules chirurgicales du sinus maxillaire. *Arch. de Laryng.*, Jan. and Feb., 1895.

JOUSLAIN. Observation de nécrose considérable de la cloison et du cornet inférieur gauche. *Archiv. de Laryng.*, May and June, 1895.

RAUGÉ. Sur un cas de rhinoscopie postérieure. *Archiv. de Laryng.*, May and June, 1895.

BRINDEL. Dent implantée à l'entrée de la fosse nasale droite, avec troubles réflexes (accès de toux et spasmes laryngées); avulsion; guérison. *Rev. Mens. de Laryng.*, 1 Jan. 1895.

BEAUSOLEIL. Étude sur l'étiologie et la pathologie du coryza caséeux. *Rev. Mens. de Laryng.*, 1 Jan. and 15 Jan., 1895.

RUEDA. Syphilome primitif intra-nasale de forme anormale. *Rev. Mens. de Laryng.*, 15 Feb., 1895.

BARATOUX. Des corps étrangers du sinus maxillaire. *Rev. Mens. de Laryng.*, 1 Mar., 1895.

BONAIN. Synechie osseuse et myxome kystique de la fosse nasale droite. *Rev. Mens. de Laryng.*, 1 Mar., 1895.

JOAL. Recherches pathogéniques sur le rhume des foins. *Rev. Mens. de Laryng.*, 1 April, 1895.

BEAUSOLEIL. Hémorragie secondaire consécutive à ablation des végétations adénoïdes. *Rev. de Laryng.*, 15 June, 1895.

LABIT. Un cas de condylomes syphilitiques des fosses nasales. *Rev. de Laryng.*, 15 June, 1895.

BONAIN. Polypes muqueux et sarcomes des fosses nasales. *Rev. de Laryng.*, 15 July, 1895.

GAREL. Deux cas de chancre primitif de la cloison nasale. *Rev. de Laryng.*, 15 July, 1895.

CHEVAL. Traitement de l'ozène par l'électrolyse interstitielle. *Rev. de Laryng.*, 1 Aug., 1895.

MOLL. Du traitement des affections aiguës des cavités accessoires de la face. *Rev. de Laryng.*, 15 Aug., 1895.

SIMONIN. Contribution à l'étude du lupus pseudo-polypeux des fosses nasales. *Rev. de Laryng.*, 1 Sept., 1895.

GUICHARD. Observations sur quelques complications des empyèmes du sinus maxillaire. *Rev. de Laryng.*, 1 Sept., 1895.

CLAONÉ. Empyème du sinus maxillaire gauche. Infection aiguë secondaire des sus-nasaux gauches. Accidents méningitiques. Mort. *Rev. de Laryng.*, 1 Sept., 1895.

MOURE. Du catarrhe naso-pharyngien. *Arch. Cliniques de Bordeaux*, Mar., 1895.

MARTIN. Exophtalmie produite par un ostéome orbito-nasal. *Journ. de Méd. de Bordeaux*, 14 July, 1895.

LAGRANGE. Empyème du sinus frontal ouvert au niveau du grand angle de l'œil. *Journ. de Méd. de Bordeaux*, 17 Feb., 1895.

AMAINOC. Histoire d'une fistule lachrymale ancienne. *Journ. de Méd. de Bordeaux*, 3 Mar., 1895.

LIARAS. Ostéome du sinus frontal. *Journ. de Méd. de Bordeaux*, 25 Aug., 1895.

LICHTWITZ. Complications des cavités accessoires du nez. *Journ. de Méd. de Bordeaux*, 1 Sept., 1895.

WINCKLER, ERNST. Zur Oberkiefer missbildungen bei Oehinderte Nasenathmung. *Wien. Med. Woch.*, Nos. 9, 10, 1895.

LENS, ANTON DE. Ueber einen neuen Nasendilator. *Wien. Med. Woch.*, No. 13, 1895.

GARTNER. Ueber Vibrationsmassage der inneren Schleimbäute. *Wien. Med. Woch.*, No. 17, 1895.

STOERK, Prof. KARL. Gehirninfection von Seite der Nase. *Wien. Med. Woch.*, Nos. 21, 22, 23, 1895.

PHARYNX, &c.

- GAREL. Sur une forme de pharyngite permettant de reconnaître le diabète u l'albuminurie. *Ann. de l'Oreille*, Feb., 1895.
- CHIARI. Sur l'origine et la structure des polypes dits muqueux des cordes vocales. *Ann. de l'Oreille*, Feb., 1895.
- RAUGÉ. Sur la chirurgie du sinus maxillaire et ses progrès depuis dix ans. *Ann. de l'Oreille*, Feb., 1895.
- LAPALLE. Perte de substance du pilier antérieur droit du voile du palais. *Ann. de l'Oreille*, Feb., 1895.
- KOCH. Anomalie rare de la lnette. *Ann. de l'Oreille*, Feb., 1895.
- GOUGUENHEIM. La diphtérie au pavillon d'isolement de l'hôpital Lariboisière et son traitement par le sérum de Roux. *Ann. de l'Oreille*, May, 1895.
- LEMAIREY. Des hypertrophies polypoides de l'amygdale. *Ann. de l'Oreille*, May, 1895.
- GOUGUENHEIM. La diphtérie de l'adulte à l'hôpital Lariboisière. *Ann. de l'Oreille*, July, 1895.
- DIEULAFOY. Tuberculose larvée des trois amygdales. *Archiv de Laryng.*, July and Aug., 1895.
- SENDZIAK. Cas extraordinaire de syphilis des amygdales. *Rev. Mens. de Laryng.*, 1 May, 1895.
- RAOULT. Des inflammations de l'amygdales linguale d'origine dentaire et buccale. *Rev. de Laryng.*, 1 June, 1895.
- CARTAZ. Deux cas de lymphadénome de l'amygdale. *Rev. de Laryng.*, 15 June, 1895.
- VERGELY. Du lipome de la langue. *Arch. Clin. de Bordeaux*, Mar., 1895.
- ROUX. Contribution à l'étude des calculs amygdaliens. Thèse de Bordeaux, 1895.
- CARMABY. De l'ablation des amygdales hypertrophisés avec l'anse électrothermique. Thèse de Bordeaux, 1895.
- LICHTWITZ. De l'ablation des amygdales hypertrophisés avec l'anse electrothermique. *Journ. de Méd. de Bordeaux*, 23 and 30 Dec., 1894.
- COURTIN. Diphtérie. *Journ. de Méd. de Bordeaux*, 30 Dec., 1894.
- LAUGA. Cas de diphtérie guéri par les injections de sérum de Roux. *Journ. de Méd. de Bordeaux*, 23 Dec., 1894.
- CREUZAN. Diphtérie à microcoques; croup; accès de suffocation; injection de sérum de Roux; guérison. *Journ. de Méd. de Bordeaux*, 13 Jan., 1895.
- PIECHAUD. Déviation congénitale de la voûte et du voile du palais. *Journ. de Méd. de Bordeaux*, 3 Feb., 1895.
- MOURE. Langue noire. *Journ. de Méd. de Bordeaux*, 10 Feb., 1895.
- MONFOUR. Cas de diphtérie traitée par le sérum antitoxique; guérison. *Journ. de Méd. de Bordeaux*, 3 Mar., 1895.
- MOUSSONS. La diphtérie à l'hôpital des Enfants; quarante-trois cas étudiés au point de vue bactériologique; quinze cas traités par le sérum. *Journ. de Méd. de Bordeaux*, 17 Mar., 1895.
- MONFOUR. Des modifications urinaires consécutives aux injections de sérum antidiphtériques. *Journ. de Méd. de Bordeaux*, 12 May and 16 June, 1895.
- DAVEZAC. Trois cas de diphtérie traités par le sérum. *Journ. de Méd. de Bordeaux*, 26 May, 1895.
- PERY. Cas de diphtérie traité par le sérum. *Journ. de Méd. de Bordeaux*, 9 June, 1895.

DAVEZAC. Angine diphtérique simulant une angine herpétique. Journ. de Méd. de Bordeaux, 11 May, 1895.

CARDEILLAC. Des modifications urinaires consécutives aux injections de sérum antidiphtérique. Thèse, Bordeaux, 1895.

TENADE. Étude sur l'amygdalite lacunaire ulcéreuse aiguë. Thèse, Bordeaux, 1895.

MOURIÉ. Contribution à l'étude du cancer primitif du voile, du palais, et de la luette. Thèse, Bordeaux, 1895.

PUJOS. Contribution à l'étude du traitement du bec-de-lièvre. Thèse, Bordeaux, 1895.

PUSSACQ-LARCEBEAU. Étude sur les tumeurs bénignes du pharynx buccal et inférieur. Thèse, Bordeaux, 1895.

LARYNX AND TRACHEA.

BARJON. Nouveau cas d'œdème aigu infectieux rétro-laryngé à pneumocoques. Province Méd., No. 4, 1894.

COLLET. Ataxie locomotrice. Crises laryngées. Paralyse des crico-aryténoïdiens postérieurs. Province Méd., March 23, 1894.

COURTADE. Laryngite pseudo-membraneuse sous-glottique à répétition. Bull. et Mém. de la Soc. de Laryng., No. 1, 1894.

DANET. Des hémorragies du larynx. Paris: Jouve, 1894.

DENUCE. Kyste du canal de Bochdalek et du canal thyro-lingual. Journ. de Méd. de Bordeaux, Nos. 10, 11, 1894.

DONLET. Corps étranger des voies aériennes chez un enfant; expulsion du corps étranger et mort par vomique. Dauphiné Méd., No. 2, 1894.

GOUGUENHEIM. Mode opératoire de la trachéotomie. Soc. de Chirurgie, séance du 14 Mars, 1894.

JOAL. Des odeurs et de leur influence sur la voix. Rev. de Laryng., etc., Nos. 3, 4, and 5, 1894.

LACOMARRET. Revue statistique des maladies du larynx, de la gorge, des oreilles, et du nez. Ann. de la Policlin., No. 1, 1894.

LEGENDRE. Enveloppements humides dans les maladies des voies respiratoires. France Méd., No. 12, 1894.

LERMOYEZ. Deux formes dysphagiques de tuberculose laryngée. Presse Méd., March 10, 1894.

LERMOYEZ. Laryngite aiguë grippale chez un professionnel de la voix. Presse Méd., Feb. 3, 1894.

MALBEC. Trachéite ou rhume. Tribune Méd., No. 5, 1894.

MARTIN-DURR. Les secousses trachéales dans l'anévrysme de l'aorte. Gaz. des Hôp., No. 35, 1894.

MORSELLI. Les altérations de la voix dans les maladies mentales en rapport avec l'état psychique. Voix, Jan., 1894.

POGREBINSKY. Contribution à l'étude du cancer primitif de la trachée. Gaz. Hebdom. Méd. de la Russie Méridion., No. 5, 1894.

PANZER, B. Ueber Tuberkulöse Stimmbandpolypen. Wien. Med. Woch., Nos. 3, 4, 5, 1895.

ROTTER. Die Verbesserten Methoden der Totalextirpation des Kehlkopfes. Wien. Med. Woch., No. 4, 1895.

BAROWICZ, ALEX. Scleroma Laryngis sub forma sclerosis interarytænoïdæ. Wien. Med. Woch., No. 6, 1895.

BAROWICZ, ALEX. Sogenannte Chorditis vocalis hypertrophica inferior. Wien. Med. Woch., No. 20, 1895.

- OERTEL. Laryngostroposkop. *Wien. Med. Woch.*, No. 22, 1895.
 KOCH, PAUL. Bronchitis Fibrinosa Chronica. *Wien. Med. Woch.*, No. 11, 1895.
 GABULOWITSCH, J. Ueber das Antiphthisin Klebs. *Wien. Med. Woch.*, 1895.
 REHN. Mandelsaures Antipyrin bei Keuchhusten. *Wien. Med. Woch.*, No. 11, 1895.
 RHIEL. Lepre der Lunge. *Wien. Med. Woch.*, No. 20, 1895.
 SEITZ, C. Die klinische Diagnose der Bronchialdrüsenerkrankung. *Wien. Med. Woch.*, No. 13, 1895.

EARS.

- BRINDEL. Méningo-encéphalite diffuse aiguë consécutive à une otite moyenne suppurée. *Soc. d'Anatom. de Bordeaux*, Jan. 15, 1894.
 BROCA. Abscès otitique du cerveau. *Bull. Méd.*, No. 24, 1894.
 BROCA. Le traitement des mastoïdites. *Arch. Internat. de Laryng.*, de Rhinol., et d'Otol., No. 1, 1894.
 CANNIEUX. Recherches sur le nerf auditif; ses rameaux et ses ganglions. Thèse de Bordeaux, 1894.
 CHAPPET. Sur l'éducation des sourds-muets. *Lyon Méd.*, No. 12, 1894.
 COURTADE. Nouveau traitement des abcès du conduit auditif externe. *Union Méd.*, No. 24, 1894.
 GELLÉ. Erreurs dans l'examen de l'audition. *Tribune Méd.*, No. 11, 1894.
 GELLÉ. Les bourdonnements d'oreille; pathogénie et traitement. *Presse Médicale*, March 3, 1894.
 GELLÉ. Du désenchatonnement de l'étrier. *Bull. et Mém. de la Soc. de Laryng.*, No. 1, 1894.
 GELLÉ. Instrument pour échancrer le mur de la logette et ouvrir l'attique. *Bull. et Mém. de la Soc. de Laryng.*, No. 1, 1894.
 GIAMPIETRO. Pathogénie et traitement de la surdi-mutité. *Ann. des Mal. de l'Oreille*, etc., No. 3, 1894.
 GLEASON. Choléstéatome aural. *Méd. Bull.*, March, 1894.
 GUILLESMIN. Notions d'acoustique. *Voix*, Jan., 1894.
 HELME. Le bromure d'éthyle en oto-laryngologie. *Ann. des Mal. de l'Oreille*, etc., No. 2, 1894.
 MÉNIÈRE. Coup de feu dans l'oreille droite. *Gaz. des Hôp.*, No. 14, 1894.
 PROMPT. Études sur les fonctions de l'oreille interne. *Dauphiné Méd.*, No. 1, 1894.
 RAOULT. Otite moyenne compliquée de pénétration de larves de mouche dans la caisse du tympan. *Rev. Méd. de l'Est*, No. 3, 1894.
 TISSER. Pathogénie et étiologie de l'ozène. *Ann. de Méd.*, No. 9, 1894.

CROUP AND DIPHTHERIA.

- CHARON. Du traitement du croup; de la trachéotomie. *Clinique*, March 1, 1894.
 GUELPA. Traitement du croup. *Clin. Franç.*, Jan., 1894.
 LEBON. De la stomatite diphtéritique. *Courrier Méd.*, March 3, 1894.
 LUCAS-CHAMPIONNIÈRE. Angine pseudo-diphtéritique à streptocoques. *Journ. de Méd. et de Chir. Pratiques*, March 10, 1894.

RABOT. Du tubage dans le croup; procédé opératoire. *Lyon Méd.*, No. 8, 1894.

X. Traitement du croup. Trachéotomie. *Union Méd.*, No. 8, 1894.

MACINTYRE, JOHN. Diphtheria and other acute inflammations of nose and throat. *Glasg. Med. Journ.*, Jan., 1895.

MARSH, E. L. Diphtheria and antitoxin. *Glasg. Med. Journ.*, March, 1895, and May, 1895.

SKOTTOWE, ALEX. J. F. Diphtheria and antitoxin. *Glasg. Med. Journ.*, April, 1895.

MACINTYRE, J. List of micro-organisms found in nose and throat. *Glasg. Med. Journ.*, Jan., 1895.

FULLERTON, ROBT. Fauces—abnormality of pillars; absence of tonsils; destruction of mucous membrane of pharynx. Case. *Glasg. Med. Journ.*, April, 1895.

CARSLAW, JAMES. Foreign body in air passages; tracheotomy; pneumothorax; recovery. *Glasg. Med. Journ.*, April, 1895.

HOWIE, J. C. Foreign body in œsophagus; removal with coin catcher. *Glasg. Med. Journ.*, Feb., 1895.

MONRO, T. K. Ulceration of lymphatic tissues of throat and intestine, with suppuration in corresponding glands in neck and mesentery. *Glasg. Med. Journ.*, May, 1895, and June, 1895.

CONNAL, J. GALBRAITH. Discharge of tympanic ossicles after scarlet fever. *Glasg. Med. Journ.*, June, 1895.

HAWTHORNE, C. O. Graves' disease in a patient with articular rheumatism and mitral stenosis. *Glasg. Med. Journ.*, June, 1895.

BERNHEIM. Ueber Mischinfektion bei Diphtherie. *Wien. Med. Woch.*, No. 12, 1895.

BOKAI, J. Erfahrungen über das Heilserum bei der Diphtheritis. *Wien. Med. Woch.*, No. 14, 1895.

Heilserum Diskussion. XIII. Kongress für Innere Medizin in München. *Wien. Med. Woch.*, Nos. 15, 16, 17, 1895.

SCHLICHTER. Ueber die Nutzlosigkeit der üblichen Desinfektion des Wohnräume bei der Diphtherie der Kinder. *Wien. Med. Woch.*, No. 15, 1895.

RITTER, J. Weitere Mittheilungen über Diphtherie und die Blutserumtherapie derselben. *Wien. Med. Woch.*, Nos. 16, 17, 18, 19, 20, 1895.

WEISS. Ueber Pathogenese und Therapie der Diphtherie. *Wien. Med. Woch.*, No. 17, 1895.

FROUZ. Serumtherapie. *Wien. Med. Woch.*, No. 18, 1895.

SIEGERT. Albuminurien nach injectionen des Behring'schen Serums. *Wien. Med. Woch.*, No. 20, 1895.

NEUDÖRFER, I. Neue Gesichtspunkte zur Pathogenese und Therapie der Diphtherie. *Wien. Med. Woch.*, Nos. 22, 24, 1895.

PURJESK, Prof. Kritik der Diphtheritisbehandlung mit besonderer Berücksichtigung der Serumtherapie. *Wien. Med. Woch.*, No. 24, 1895.

WIDERHOFER, Hofrath V. Die Behring'sche Heilserumtherapie bei der Diphtherie. *Wien. Med. Woch.*, No. 1, 1895.

NEUDÖRFER, I. Behring's Heilserum und das Wasserstoffsperoxyd. *Wien. Med. Woch.*, Nos. 2, 3, 4, 5, 6, 1895.

MONTI, Prof. Beitrag zur Anwendung des Heilserums gegen Diphtherie. *Wien. Med. Woch.*, Nos. 4, 5, 1895.

HEIM, Dr. Die Behandlung der Diphtherie mit Behring'schem Heilserum in St. Josef's Kinderspitale i. Wien. *Wien. Med. Woch.*, No. 4, 1895.

UNTERHOLZNER. Die bisherigen Ergebnisse der Behandlung der Diphtheritis mit Behring'schem Heilserum im Leopoldstädter Kinderspitale i. Wien. Wien. Med. Woch., No. 4, 1895.

KASSOWITZ, Prof. M. Wie steht es mit der Serumbehandlung der Diphtherie. Wien. Med. Woch., Nos. 5, 6, 7, 8, 1895.

DRASCHE, Hofrath Prof. Ueber das Heilserum bei der Diphtherie. Wien. Med. Woch., Nos. 6, 7, 8, 1895.

Diskussion über die Therapie mit dem Behring'schem Heilserum. Gesellschaft der Aerzte in Wien. Wien. Med. Woch., Nos. 6, 7, 1895.

MONTI, Prof. Ueber Behring's Heilserumtherapie der Diphtherie. Wien. Med. Woch., Nos. 8, 9, 10, 1895.

KARLINSKI, Dr. JUSTYN. Beeinflusst das Diphtherie-Heilserum irgend wie den Stoffwechsel im gesunden Organismus. Wien. Med. Woch., No. 8, 1895.

NAVRATIL, VINZENZ. Das Wasserstoffsperoxyd in der diphtherie-therapie. Wien. Med. Woch., No. 11, 1895.

WIEDERHOFER, Prof. Der Beginn der Diphtherie in Wien. Wien. Med. Woch., No. 11, 1895.

REHN, H. Intubation bei Diphtherie. Wien. Med. Woch., No. 11, 1895.

ERSTEIN. Ueber Pseudodiphtherie septämischen Ursprungs. Wien. Med. Woch., Nos. 11, 12, 1895.

HAUSEMANN. Ueber die Beziehungen des Löfflersehen Bacillus zur Diphtherie. Wien. Med. Woch., No. 11, 1895.

GANGHOFNER, Prof. Intubation bei Diphtherie. Wien. Med. Woch., No. 12, 1895.

Diphtherie und das Diphtherieheilserum. Diskussion. Berl. Klin. Woch., No. 2, 1895.

MEYER, E. Diphtherie und Angina lacunaris. Berl. Klin. Woch., No. 3, 1895.

MAX WOLF. Zur Diphtherie frage. Berl. Klin. Woch., No. 7, 1895.

HUNNIUS. Zur Behandlung der Diphtherie mit Heilserum. Berl. Klin. Woch., No. 10, 1895.

SCHAWEN. Die Anwendung des Diphtherie-antitoxins in der Land praxis. Berl. Klin. Woch., No. 10, 1895.

HEIDENHAIN. Zur Heilserumtherapie bei Diphtherie. Berl. Klin. Woch., No. 10, 1895.

KAUPE. Beitrag zu den Nachkrankheiten nach Injectionen von Diphtherie Heilserum. Berl. Klin. Woch., No. 10, 1895.

HEIMANN, M. Ein Fall schwerer Erkrankung nach Injectionen von Diphtherieheilserum. Berl. Klin. Woch., No. 10, 1895.

LISSARD, A. Zur Behandlung der Diphtherie mit Heilserum. Berl. Klin. Woch., No. 10, 1895.

HALLER, P. Injection von Heilserum mit schweren Folgen. Berl. Klin. Woch., No. 10, 1895.

WALDSTEIN, L. Beobachtungen an Leukocyten; sowie über einige therapeutische Versuche mit Pilocarpin bei der (Diphtherie?) Streptokokken Angina; Lymphdrüsen Erkrankung, etc. Berl. Klin. Woch., Nos. 17 and 18, 1895.

FRAENKEL, C. Ueber den Stand der Serumtherapie in Frankreich. Berl. Klin. Woch., No. 22, 1895.

NECK, BASEDOW'S (GRAVES') DISEASE, &c.

BOBROV. Physiologie de la glande thyroïde et son rôle dans la pathologie et dans la thérapie de la maladie de Basedow (en russe). Gaz. Hebdom. Méd. de la Russie Méridionale, No. 9, 1894.

RÉCLUS. Accidents produits par la cocaïne. Soc. de Chirurg., séance du 21 Mars, 1894.

RICARD. Fibro-sarcoma du corps thyroïde. Gaz. Méd. de Paris, No. 6, 1894.

VARIOT. Sur le traitement de la coqueluche. Prov. Méd., March 24, 1894.

VOISIN. Myxœdème et glande thyroïde. France Méd., No. 12, 1894.

BUSCHAN, G. Kritik der modernen Theorien über die Pathogenese der Basedow'schen Krankheit. Wien. Med. Woch., No. 1, 1895.

GLAX. Zur Klimatherapie des Morbus Basedowii. Wien. Med. Woch., No. 10, 1895.

ISRAËL. Mit Schilddrüsenfütterung behandelte Strumafälle. Wien. Med. Woch., No. 24, 1895.

FOGES, ARTHUR. Antitoxinbehandlung. Wien. Med. Woch., No. 24, 1895.

FALKENHEIM. Barlow'sche Krankheit. Wien. Med. Woch., No. 19, 1895.

THE
JOURNAL OF LARYNGOLOGY,
RHINOLOGY, AND OTOTOLOGY.

VOL. X.

MARCH, 1896.

No. 3.

Original Articles are accepted by the Editors of this Journal on the condition that they have not previously been published elsewhere.

Twenty-five reprints are allowed each author. If more are required it is requested that this be stated when the article is first forwarded to this Journal. Such extra reprints will be charged to the author.

The Editors are not responsible for opinions expressed in original Articles or Abstracts in this Journal.

Editorial Communications are to be addressed to "Editors of JOURNAL OF LARYNGOLOGY, care of Rebman Publishing Company, Limited, 11, Adam Street, Strand, London, W.C."

**CONTRIBUTION TO THE ETIOLOGY OF BLEEDING
TUMOURS OF THE NASAL SEPTUM.**

By Dr. JOHN SENDZIAK (Warsaw).

O—, thirty-four years of age, a teacher, consulted me at the end of December, 1894, on account of frequent and obstinate hæmorrhages from the nose, which had already lasted about a year. On closer investigation I learned that the bleeding always came from the right side of the nose. It was at the beginning neither so profuse nor frequent, but six months previously it began to be very abundant, and recurred twice daily, so that the slightest irritation of the right nostril, by touching with the finger, or simply when blowing the nose, caused not only bleeding, but severe nasal hæmorrhage. Latterly the patient remarked that the right nostril became increasingly obstructed. In consequence of the bleeding the general state began to fail more and more; the patient became emaciated, lost appetite, and the complexion began to pale to the colour of wax. He became nervous to the highest degree.

On examination I found a very bad general state, with unusual pallor of the skin, approaching a shade of earthy yellow. The pallor extended to the mucous membranes. In the internal organs I found no changes; in the nose, however (in the right nostril), only a small passage for the air, and a growth the size of a walnut—soft, very vascular, and bleeding on the slightest touch with the probe or brushing lightly with a solution (ten per cent.) of cocaine. The attachment of the tumour was situated on the nasal septum, at its inferior part, about on a level with the middle turbinated body.

Operation was proposed, to which the patient willingly consented. There was no hæmophilia, as far as I could judge from the patient's history. In spite of that I resolved to use the galvano-caustic snare, very cautiously, in anticipation of hæmorrhage. As the slightest contact with the tumour—even brushing, as I had convinced myself before—caused pretty considerable bleeding, I used for this operation powdered cocaine (fifteen per cent.): then, applying a suitably prepared galvano-caustic snare, which I treated very carefully and slowly—not too strong, and at intervals—I succeeded in removing the growth, or rather its greater part (the size of a small walnut), almost without bleeding, and completely without pain. The remaining part, also the size of a walnut, I removed in the same manner three days later.

The course, after the first and second operations, was excellent; no fever or local inflammation.

Two days later, on repeated examination, I perfectly convinced myself of the point of attachment (viz., the superior part of the cartilaginous septum, almost on the edge of the osseous part). I thoroughly once more cauterized the site of the tumour, as I feared a relapse—the more so as the microscopical appearance of the growth seemed to me suspicious. The nasal septum after removal of the tumour showed itself considerably deviated. In the middle meatus, in the region of the hiatus semilunaris, on the last examination, I found a very small polypus, the size of a small pea, which had the appearance of a simple myxomatous tumour.

As the patient was obliged to leave, and was exhausted with the previous operations, I abandoned the removal of this small polypus, the more so that it could not produce any disturbance. I prescribed an ointment with resorcin, the so-called nasal baths, with aluminium acetico-tartaricum, and asked him to inform me afterwards of the result of the treatment, and also to return later to Warsaw.

After some months the patient wrote to me that his general state was considerably ameliorated, the obstruction of the nose (right side) cured, and the bleeding had completely ceased.

Expecting an unusual anatomical structure of the growth, I begged Dr. Miklanewski to examine it under the microscope, for which I here thank him most sincerely. The result of his examination is the following: Both surfaces of the growth on section were dark red—almost chocolate colour. Embedded in the usual manner in paraffin, and stained with hæmatoxylin and eosin, or Ehrlich-Biondi's fluid, the sections presented under the microscope principally very numerous vessels, filled with blood. They were much distended, and separated from each other only by thin partitions (trabeculæ). The whole growth reminded one very much of the structure of a sponge. Each partition is formed of fibrous tissue, with numerous fusiform cells, and also round ones, especially around the blood vessels. In those places where there were fewer vessels, and where they were less regularly grouped, in one part of the growth, the fibrous tissue contained more cells, nodules of different sizes: long, slightly-coloured, fusiform, larger and smaller, oval, round, etc. In general, their number is much more considerable than in normal stroma.

Besides, one meets in many places with considerable agglomerations of them. These places were of an undoubtedly suspicious character, namely, sarcomatous. In the above case we had to deal with an exceedingly rare case, namely, *angioma cavernosum sarcomatoides*. This diagnosis was confirmed by such an authority as Prof. Brodowski, who was kind enough to examine the preparations.

Recently much has been written about the so-called bleeding tumours of the nasal septum (Otto Schadowaldt, Arthur Alexander, Max Scheier, Paul Heymann—all in "Arch. für Laryng.," March, 1894, Bands 1 and 2; Lubliner, "Medicina," March, 1895).

In most cases they are simple fibromata, with a more or less vascular fibroma telangectoides or angiomatoides; and less frequently the true angiomata (Garel, "Annales des Mal. de l'Oreille," Feb., 1893; Jurasz, "Die Krankheiten der Oberen Luftwege," etc.). Still more rarely the so-called cavernous angiomata are observed. Schwäger, from the clinic of Dr. Seifert, Würzburg, wrote an excellent paper, "Ueber Cavernöse Angiome der Nasenschleimhaut" ("Arch. für Laryng.," Jan., 1893), where he described six cases; in all, however, the turbinated bodies were the point of origin of the growth. Cobb ("Brit. Med. and Surg. Journ.," Nov. 23, 1893) and Strazza ("Rev. Int. de Laryng.," March, 1894) described cases of *angioma cavernosum* of the nasal septum.

But such characters as were observed in our case—namely, cavernous angioma with sarcomatous points—must be regarded as exceedingly rare. Gouguenheim and Hilary ("Annales des Mal. de l'Oreille," April and June, 1893) had observed and operated on two cases of tumours of the nasal septum which a little resembled our case; in one of them Dansac found under the microscope sarcoma telangectoides—in another, endothelial angiosarcoma.

Our case merits notice: (1) Because it was in a man. Lange, Schadowaldt, B. Fraenkel, Heymann, etc., observed cases of *angioma cavernosum* in women; Scheier also in a man. (2) The growth was not situated on the anterior and inferior part of the cartilaginous septum, on the so-called locus Kiesselbachi, as generally occurs (Schadowaldt, etc.), but at the posterior superior part of the cartilaginous septum in the neighbourhood of the osseous septum. Finally (3), there existed evidence of malignant sarcoma, with a benign (polypus) tumour of the nose, to which, amongst others, Kafemann ("Rev. Int. de Laryng.," Oct., 1893) has drawn attention.

SOCIETIES' MEETINGS.

THE BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION.

Ordinary Meeting, January, 1896.

President—Dr. GEORGE STOKER, in the Chair.

A Suggestion to Abolish Gargling in the Treatment of Diseases of the Throat. By LENNOX BROWNE.

The length of time—I have heard it estimated at twenty years—which is necessary for any scientific fact to be generally accepted in daily practice, is only exceeded by that which lapses before the vitality of any exposed fallacy is finally extinguished.

I suppose, there are still practitioners who continue to use swabbings of solutions of nitrate of silver, as the one and only remedy for all affections of the throat; and of those who have been converted on this point the majority appear to pin their faith, with similar lack of discrimination, to the use of glycerine of tannin, which is equally disagreeable and only less baneful in that it is inert.

The uselessness of gargles may appear a trite subject to discuss before an association of laryngologists, and the apology for doing so lies in the hope that an agreement of the Fellows on this question will lead to a more authoritative reception of this suggestion for their abolition by general practitioners of medicine. In subacute and chronic affections of the throat, when the disease lies further back than the anterior pillars of the fauces, gargles, as employed by the ordinary or popular methods, are inefficient, for the fluid never touches the site of the lesion.

For the purpose of lavage the posterior pillars and wall of the pharynx the method of Von Troeltsch must be used. The following are the directions:—"Take a portion—say a tablespoonful—of the gargle in the mouth, hold it in the back of the throat with the head thrown back; then, closing the nose with the finger and thumb to prevent entrance of air, open the mouth and make the movements of swallowing without letting the liquid go down the throat."

But this process is by no means easy to perform efficiently, and is impossible when any acute inflammation of the throat is present, on account of the pain which is caused by the muscular action necessary for its performance.

The muscular acts required for ordinary gargling are entirely irregular, being unlike those which are called for in the exercise of the normal functions, such as breathing, speaking, swallowing, or even laughing.

In all cases, therefore, of acute inflammatory disease of the throat, wherein the act of swallowing causes severe pain, and even movements of the tongue are attended with discomfort, and in cases (such as tonsillitis) in which the mouth can be opened but very slightly, the act of gargling by any method cannot but tend to increase the inflammation and the distress of the patient.

Gargles are also contra-indicated in cases where the patient requires to be kept in the recumbent posture in bed—notably in cases of diphtheria, in which cardiac failure has to be especially guarded against—since the act necessitates his rising from that position. And as, according to the well-known law, paralytic sequelæ attack earliest and to the greatest extent muscles in proportion to the constancy of their use, palatal and faucial paralyses, so early and frequent as they always are, cannot but be accentuated by the irregular and excessive functional exercise involved in the act of gargling.

Lastly, gargles, however employed—that is, by the ordinary method or by that of Von Troeltsch—cannot be safely prescribed except the ingredients are harmless should any portion be inadvertently swallowed.

Obvious as this fact is, it would appear to be frequently forgotten, judging from the prescriptions which one sometimes sees.

All these objections to gargles in the adult obtain with still greater force in the case of children, in whom the act of gargling is in the majority of cases simply impossible.

Gargles, therefore, should only be employed as emollient and antiseptic mouth-washes, harmless ingredients being used. As a substitute I would recommend the more general use of mouth irrigations, sprays, lozenges, and, in the case of children, of medicated confections.

DR. DUNDAS GRANT : I hope that Mr. Browne, in bringing forward this very practical question, although it seems a more everyday one than those that we usually discuss so lengthily in this room, will appreciate that the comparative silence following it is due, as I am sure it is, to the fact that we are so much at one with him. His views will obtain general acceptance, and I think that most of us find ourselves prescribing gargles less frequently—except possibly when we are forced to give them on “placebo” principles; and his remarks with regard to the application of nitrate of silver I think are without exception. We have substituted for nitrate of silver the use of chloride of zinc, and I think those who have had the opportunity of following Mr. Browne’s teaching will say that in this a very great advance has been made. It was only the other day that the late Fauvel, the *doyen* of practical laryngology, read a paper upon the advantages of the application of chloride of zinc. This was, in point of fact, for the purpose of uttering a diatribe against the nitrate of silver treatment, which Mr. Browne has from the commencement of his teaching always condemned so thoroughly. There is one aspect of the gargling question which I think will come up, and to which we might attach at least a theoretical, and I believe in time also a practical, value : viz., in practising the method of Von Troeltsch it is not altogether useless as a method of massage, and there is a school in which the massage of the throat is given a prominence which I think is quite

undue, but still not to be despised. I have seen some advantage from massage of the outside of the pharynx, and possibly also the Eustachian tubes have been improved by the patient practising at the same time Von Troeltsch's method of gargling. The swallowing part of it is, as we know, the most essential feature; and I think that in subacute cases, where a degree of congestion and thickening remains, we may yet find it of some if only of limited use.

Cases of Disease of the Nose and Ears treated by means of Oxygen Gas. By the PRESIDENT.

The PRESIDENT: The first case I wish to refer to, which is not mentioned in the programme, is a case of syphilitic ozæna. It will be in the recollection of the Fellows of the Association that last October I introduced this case to them. The history is as follows:—The patient, a woman, has had syphilitic ozæna for five years; and every form of treatment had been tried, but still the horrible stench remained. She had lost most of the internal parts of the nose—the turbinated bone, the cartilaginous septum, part of the wall of the right antrum. At the end of August we commenced the oxygen treatment. My method is to fill a bag which holds a cubic foot of oxygen; the bag is placed between boards for the purpose of obtaining pressure, and then there is a tube with a tap (which empties the bag) which has an india-rubber nose-piece, through which the oxygen is inhaled.

The oxygen was applied every second hour during the day. We found that if treatment was continued longer than one hour headache was induced. She had one month's treatment, and nothing else was done, or has been done since; and from the condition of the patient now, there being absolutely no smell, I think we may regard the case as a successful one in the treatment of ozæna.

The second case is one of ozæna, which I have called "chlorotic," meaning simply to imply that this disease, as occurring in young girls with some menstrual trouble, is generally of the atrophic form. This girl has had a very bad smell, accompanied by discharge and formation of crusts in her nose, for the last two years. She came into the hospital on the 31st December. The treatment was commenced on the 1st January, and on the 3rd, to my own satisfaction, *after three days' treatment, there was no smell from her nose.* Since then treatment has been continued on exactly the same lines as the previous case: viz., she has inhaled oxygen every second hour during the day, not at all during the night; the only other treatment being, as in the other case, the use of warm water to syringe out the nose two or three times a day, or as necessity arose. The following are my notes of the progress of the case:—January 1st, oxygen was commenced. On the 3rd there was no smell; on the 4th she was perfectly free from crusts; on the 6th, ditto; on the 7th, no smell; 11th, no crusts; 13th, no crusts; and during the 15th, 16th, and to-day (17th), there have been no crusts in her nose. The case has only been treated for sixteen days, and I think you will agree with me that the result is satisfactory. Of course, some time will have

to elapse before we can attempt to gauge the permanency of the cure, just as in the case of syphilitic ozæna.

My third case is that of a girl, the daughter of a clergyman; and before describing this case I would say that in testing the value of any new treatment in cases of this kind, there are several factors that must be present to make the test a satisfactory one, even as regards individual cases. First of all, we must have a patient who is a bad case—that is to say, a chronic case; secondly, one in which all other forms of treatment have been tried; and, thirdly, the treatment prescribed must be carried out conscientiously and regularly. It is not always easy to find these circumstances combined, because as a rule chronic otorrhœa cases are not admitted into hospital. The girl I allude to is the daughter of intelligent, educated parents, who have an affection for their child, and everything (as you will hear from the following history, which I received from the father) has been done with extreme regularity and loyalty.

The following is the history of this case :—

The patient is now fourteen years of age. More than seven years ago she had a severe attack of scarlet fever, and the discharge came freely from the ear in the second week. In the fifth week inflammation and pain set up behind the left ear. The mastoid was opened and a drainage tube was put in. For a month afterwards a dark-coloured offensive discharge was most profuse from both ears, and has lasted in a more or less chronic form until the patient passed into my care, nine weeks ago.

During these seven years, as far as I can learn, every form of treatment has been applied, including syringing with Condy's fluid and water and other antiseptic lotions, insufflations of boric acid and iodoform, etc.; also drops of sulphate of zinc, and drops of spirit and boric acid and boro-glyceride. These various forms of treatment have been most carefully carried out, the ears having been syringed and carefully dried out before the drops or insufflations were used.

The patient being under the care of a well-known London specialist, the oxygen treatment was commenced on the 9th of November, and was continued for about four hours a day during the subsequent nine weeks. The improvement commenced at once; the offensive discharge and smell disappeared during the first ten days.

The following are my notes of the conditions present when I first saw the patient :—

Nov. 1. Hearing distance, watch, right ear, two inches; left ear, ten inches. Right ear, lining of meatus swollen and boggy. Profuse and most offensive discharge, constant and severe pain. Glands below the ear swollen and painful; large perforation of right membrana tympani, seen with great difficulty on account of the swelling of the meatus.

Nov. 19. Oxygen has been used three hours daily at intervals. Meatus healthy; swelling disappeared; discharge and smell almost gone; membrana tympani plainly seen; large perforation and fundus visible.

Dec. 18. Much better; no pain, swelling, smell, or discharge; mem-

brana tympani seem to be granulating. Hearing distance, watch, right ear, two feet ; left ear, two feet.

I must regard this as a satisfactory result. I do not suppose for one moment that an *ex parte* statement of any individual, however interested, can be accepted as final proof of the success of any new treatment, nor do I think that the lesson which we may learn from any case produced, no matter how interesting, can be accepted as complete evidence ; but, gentlemen, I am equally certain that no just man will condemn a system which has produced these results without a fair trial. Now it is in the hands of my professional brother specialists to give this system a fair trial. I have met with a good deal of opposition as to this oxygen treatment in cases which did not enter into our speciality, but I do not look forward to that kind of prejudice among ourselves. People are accustomed to say that laryngologists are a narrow-minded class, but I think there are other people who can take that home to themselves more than we can.

MR. LENNOX BROWNE : I am sure I voice the sentiments of all the Fellows when I congratulate you, sir, on the success you have obtained in the treatment by pure oxygen of these very intractable and obstinate cases. I do not at all object to the word "chlorotic," for many of these patients suffer especially from amenorrhœa. That the patients now exhibited are, from the purely clinical point of view, cured, cannot be gainsaid. For me there is but one practical test of the cure of ozœna, and that is the evidence of the nose of the observer ; and certainly when applying this test to these cases one finds that the ozœnic fœtor—at any rate for the time being—is absent. I would suggest that there are certain points the observance of which might make these cases somewhat more interesting. I should like, for instance, to have some information of the character of the micro-organism by examination and culture of the nasal secretions, and of the aural secretions, both before and after treatment, as well as of the blood condition, also before and after treatment. Such information would be valuable as a guide to us, and would also satisfy that class of critic who does not believe that a man tells the truth when he says so-and-so occurred, but will believe what the microscope and culture can tell. In conclusion, I may say that the results here presented will induce me to put this treatment to the test at a very early date.

MR. ST. GEORGE REID : I should like to ask you, sir, in regard to the treatment by oxygen, whether you have come to any conclusion as to the effect of the oxygen on the pathogenic organisms. On noticing the subject of your communication, I thought it might be well to test the effect of oxygen on the growth of some of the most common pathogenic bacteria. For this purpose I selected cultures of the staphylococcus aureus and albus, streptococcus pyogenes, and diplococcus pneumoniae, and inoculated eight agar tubes in the ordinary manner. Four of these I filled with oxygen and placed in an air-tight chamber of oxygen. The eight cultures were then placed in the incubator and grown at thirty-seven degrees C. Contrary to my expectations, on examination after eight hours, I found that the only culture which showed any signs of growth in

oxygen was a faint trace of staphylococcus aureus ; whereas in the atmospheric tubes there was a very distinct growth of staphylococcus aureus, and less so of albus ; the others were not apparent. In ten hours all the atmospheric cultures were growing : in the oxygen the staphylococcus aureus and albus were showing well ; streptococcus pyogenes slightly ; no signs of diplococcus pneumoniae. In fourteen hours all the growths were apparent, but it appeared that the organisms growing in the air were about four hours ahead of those in oxygen, and this difference was kept up ; and you will notice, if you compare these eight cultures, that it is still quite distinct. The tubes were removed from the incubator after twenty-four hours and examined, but no difference could be detected under the microscope.

Dr. DUNDAS GRANT : I should like to ask you, Mr. President, whether the cost of carrying out this treatment places it within the reach of many of the poorer people with whom we have to deal, and whether the time that is required for it would interfere with the business occupations of those whose time is much taken up. There can be no question as to the extreme efficacy of the treatment that has been carried out, and in the left ear of this aural case there is a condition which tended to make the case particularly resistant, viz., the fact of the disease being more or less concentrated in the membrane of Shrapnel. The attic has been seriously affected, and we know how very obstinate such cases are. When the expression, "every form of treatment has been tried," is employed, I always ask myself how far that is an absolute or only a relative statement. For instance, I find very remarkable results follow the use of the "alcohol" treatment, and I should like to ask whether in the present case that has been employed.

Dr. MILLIGAN : I understood you to say that in the treatment of the nasal cases inhalation of oxygen was used for an hour, and then intermitted for an hour and so on. What I should like to ask is, Is an application of oxygen used in the same way in the treatment of suppurative middle-ear disease ? Is it used for an hour, and then intermitted for an hour and so on, or is it continuous ? Also, I should like to know if, before the oxygen treatment was commenced, a careful examination was made as to whether any caries of the middle ear was present or not ? I think that the presence of caries would undoubtedly influence the success which you appear to have met with when employing oxygen in the treatment of such cases. If the disease is confined to the soft parts, the treatment is undoubtedly very much simpler than when secondary affections of the bone are present.

Dr. MACNAUGHTON JONES : I should like to ask, sir, if you took any notes when you examined these cases of the nature of the ozæna, and the portion of the nasal membrane affected ; also, if there was any evidence that the accessory cavities were affected with ozæna. Of course, not having tried the oxygen treatment myself, it is entirely premature to say anything with regard to it. It would strike one immediately that the oxygen, by its permeating the accessory cavities, and getting into those nasty little clefts and roofs of the nostril, would certainly have in that way a decided advantage over local application and the general inter-

ference with the affected parts. However, for my own part, I think that in these cases of ozæna a great deal depends upon the length of time, the nature of the ozæna, and whether the accessory cavities are largely involved or not. In this particular case, if the antrum was involved—especially with the evidence that has been shown of its effects on nasal bacteria—I should fancy the oxygen would have a special advantage. With regard to the aural case, here we are on quite different ground. I must say that I do not myself find that in the treatment of chronic suppurative catarrh, if systematically carried out by the surgeon, that we have those unsatisfactory results which we hear so commonly spoken of. Dr. Dundas Grant spoke of alcohol. I have used it in combination with strong boric acid treatment, and various other disinfecting remedies, and I must say that the alcoholic treatment has generally given me good results. But it is rather after the exposed parts have been thoroughly cleaned—then, I think, as a drying remedy, and used continuously by the patients or a nurse—that the alcohol comes in; but not so much in the earlier stages. In regard to oxygen—I feel this is a matter entirely for future experiment and experience, and one which, after what you, Mr. President, have said, decidedly demands careful consideration and practice by anyone who has to treat such cases. I must, however, say that, for my own part, I believe that in chronic suppurative otitis a great deal of the failure in treatment depends on the clumsy method in which remedies are usually applied by patients or their friends—imperfect applications, useless syringing, and so forth. If we want to cure cases of this nature, close personal attention to the patient is essential. That may be extremely difficult in many cases; but, so far as my own experience is concerned, if that attention be given, thorough cleansing with disinfectants right through the tympanum be maintained, and the drying treatment adopted, a good result will generally follow. I am not myself in favour of blowing powders into the ear. I believe that in a great many instances all the good that is done is to clog up an old foetid discharge, which accumulates behind these powders, and which is only discovered after some future syringing has removed the amalgam of discharge and powder which gradually forms, and so seals up the septic accumulation.

The PRESIDENT'S reply: With regard to the examination for bacilli, suggested by Mr. Browne, I may say that in these special cases I have made no examination; but in the cases, "oxygen treatment," as applied to chronic ulceration, I have examined the blood, and I have found that there was an increased number of the red cells in the blood after the treatment was begun. We have had a bacteriological examination made of a considerable number of cases by the Clinical Research Association, and the results were extraordinary. I am sorry if I intrude upon your time, but I should like to explain this clearly. In one case, with ulcers on each leg, it was decided that one of the ulcers should be treated with oxygen and the other by ordinary antiseptic methods. On the left the ulcer had existed for four years. It was treated by antiseptic methods. The pus was absolutely aseptic; no cultivations could be got, and the ulcer did not heal. On the right leg oxygen was tried. The pus was

examined. It was full of staphylococcus and streptococcus, and the ulcer began to heal. In regard to the other cases, also, that I have treated with oxygen, the pus has contained staphylococcus and streptococcus. I hope in the future to have an extensive and consecutive examination made. With regard to the cost of the various apparatus, that varies according to the instrument maker to whom you go. The apparatus I have shown you is by Mr. Fellows. As to the cost of the gas, in ordinary cases of ulceration we have reduced it to about a penny for twelve hours ; that is to say, we use a quarter of a foot of oxygen, the rest being made up of air which is purified by being pumped through warm water and then through Condyl's fluid. I have been using that at the Hospital for Incurables (at West Norwood), where we have had the most successful results. With regard to the length of time the oxygen is used in these cases, inasmuch as the patients swallow a good deal of oxygen we are obliged to use it every alternate hour, otherwise headache is induced. In cases of ulceration of the leg and alopecia areata, it is carried on at night. There is no reason why it should not be carried on at night in cases where patients are occupied during the day. The eight hours' play could be devoted to the use of oxygen gas.

With regard to disease of the accessory cavities, you will observe that in the last case the right antrum is eaten into ; that is the syphilitic case. Of course, I think, both with regard to the ear and to the nose, the perfection of the oxygen treatment is that the oxygen, which is the healing element, permeates into many places where neither powders nor liquids can be got.

The President, in reply to Dr. Grant, said that the ear case had not had more than three hours' treatment per day, but he believed that if the treatment had lasted for twelve hours she would have been better much sooner ; in fact, quite well by now.

In reply to Dr. Milligan, the President said that he did not think there was any caries in the ear case. The oxygen was used intermittently as in the nose cases.

Dr. MACNAUGHTON JONES : I should like to ask you, Mr. President, whether, in the case of a patient coming to you with fetid discharge from the middle ear, with a ragged opening and congestion, you would start with the oxygen treatment and not pursue any other plan side by side.

The PRESIDENT : At this stage of the treatment I do not use any other method. If I employed, say, boric acid lotion, and the results were satisfactory, it would be said it was the boric acid and not the oxygen that produced them. I entirely agree with Dr. Jones that in the future it will be one's duty to let the oxygen treatment go side by side with other treatment, either local or constitutional.

A Case of Cochlear Apoplexy. By Dr. MILLIGAN.

Dr. MILLIGAN : The facts of this case may be interesting to the Fellows of this Association, and are as follows :—

The patient, a gentleman aged forty-one, had previously enjoyed good general health. He had had an attack of gonorrhœa twenty years previously, but denied ever having had syphilis. He was, however, a

hard liver—accustomed to drink a bottle of champagne for lunch, and every evening for dinner consumed a bottle of port. He ate well and he drank well. His arterial tension was consequently somewhat high and the veins of his face well dilated. One evening he went to bed in his usual good health, to wake up early in the morning with a very loud noise in his head and quite deaf in his left ear. There was, however, no giddiness, no sickness, and no pain. He was able to talk and write perfectly correctly. He was seen shortly afterwards by his own medical attendant, and remained under his charge for two or three days. A little later on I saw the patient in consultation, and found upon examination that there was no hearing in his left ear. The lower tones of a tuning-fork placed upon the bridge of his nose were audible, but he was unable to discern any high-pitched note, nor could he hear a Galton's whistle. There was nothing abnormal in the external meatus or middle ear, and the Eustachian tube was perfectly patent. The conclusion arrived at was that the patient was suffering, probably, from hemorrhagic effusion into his cochlea. I gave a bad prognosis as far as his hearing was concerned, and, unfortunately, rather frightened the patient. A few days later he wrote, saying that he would like to have a second opinion, and he accordingly went to London and was seen by two aurists. One opinion was that in all probability a considerable amount of hearing power would return within six weeks; the other opinion was that the hearing power would probably remain as it was. The patient had in the meantime been put upon small doses of iodide and bromide of potassium, and an occasional blister had been ordered over the left mastoid process. As no improvement followed from this treatment, it was decided to try subcutaneous injections of pilocarpin. These injections were carried out persistently for six weeks, but as at the end of that time there was not the slightest improvement the treatment was abandoned. His liquor had also been withdrawn, and he had been advised to live upon a light diet consisting of milk and farinaceous food. I mention the case because it appears to me to be an undoubted case of cochlear apoplexy without damage to any other portion of the internal ear.

DR. MACNAUGHTON JONES: I notice that this case is put down as one of "cochlear apoplexy." There are a few points connected with the case which I should like to enquire about. Dr. Milligan has not told us anything with regard to migraine in the case, or if there were any special tendency to fall to either side, or if there were a synchronous onset of tinnitus with the deafness, or if there had been any previous evidence of implication of any other cranial nerves—say the facial. I should like to know also how he has localized the apoplectic effusion into the cochlea and not into the semicircular canals, because these are cases that I think we as aurists are most interested in trying to analyze. At the last meeting of this Association, when I had the pleasure of being present, the subject of Ménière's disease was brought forward; and I think we were all agreed that the time had come when it would be of very great importance to isolate true Ménière's disease apart altogether from any group of symptoms which are associated with that name.

I do not see myself that we have got yet so far that we can localize

to one particular part of the internal ear the seat of the effusion. We may believe it to be, and we know it to be, a sudden effusion—an apoplectic effusion into the labyrinth, or some part of it; but it is very difficult to localize it. I would also like to ask Dr. Milligan if this patient, when he was affected, or a few days afterwards, could write legibly. The difference between the two opinions that have been referred to by him is just one of those points that depend upon a correct differentiation of the nature of such a case as this. If it is of a pure apoplectic character, occurring suddenly for the first time, as in the case under discussion, then I think it is the general experience of most of us that after a given time there is an amelioration in the symptoms, and the patient hears better—at any rate, there is an improvement. The noise, however, is persistent, but the migraine disappears. The hearing improves until he gets a second, or sometimes a third, attack, and then he becomes absolutely deaf. Another point which interested me in the case was the mention of pilocarpin treatment. I saw a case quite recently in which, having applied all the tests for hearing which we can well conceive, I came to the conclusion that the patient was absolutely deaf, and I might as well have been injecting pilocarpin into the patient's boot-leather. But the sufferer, a nervous woman, was persuaded by her friends to undergo, and was subjected to, six weeks of pilocarpin treatment. I saw her the other day, and all I can say is that she will be a very long time before she recovers from that six weeks of treatment.

Dr. DUNDAS GRANT: I think, with Dr. Milligan, that the loss of hearing for the very high pitched tones of Galton's whistle, tested as he has done in this case, was quite sufficient ground for diagnosing an affection of the cochlea—at all events, its lower whorl, which, as we know, is the part of the cochlea most readily affected by increased blood pressure, or by the effusion of blood. I did not hear whether any vertigo was present, and in the absence of it I think we may say that the affection had not reached the semicircular canals. It is a very curious occurrence. Of course, we have our cut-and-dry cases of labyrinthine effusion, where we have the well-marked vertigo along with nerve deafness. In other cases we have the vertigo without deafness, and these are the cases where the real difficulty in diagnosis comes in; but fortunately they are very rare. There is absence of the deafness which goes to make up Ménière's type. The diagnosis is in them chiefly a matter of conjecture; but I look upon it as unmistakable when there is, as in Dr. Milligan's case, loss of hearing to high-pitched tones. Here we may localize the affection as being in the cochlea. It is pretty well recognized now that in affections of the intracranial portion of the auditory nerve or its central connections, the loss of hearing is rather for the middle tones of the range, and not for the extremely high ones.

Dr. MILLIGAN: I must apologize for having given such a brief sketch of my case. My object in doing so, however, was to save the time of the Association as far as possible. In reply to Dr. Macnaughton Jones's question, I may say that the patient had not at any time during the course of his trouble any tendency to fall to either side, and also that the tinnitus and the deafness were noticed at one and the

same time. The patient suffered from no other nerve lesion, and his general health was good. The reason why I excluded any involvement of the semicircular canals was because there had been no vertiginous symptoms at the commencement of his illness, or at any subsequent period. The patient could write perfectly legibly the day of his attack, and subsequently. The effusion appeared to me to be so rapid, and the destruction of the nerve so complete, that I was forced to give a bad prognosis, and to say that in my opinion no improvement would take place. With Dr. Dundas Grant's remarks about the differentiation between disease in the cochlea and disease in the semicircular canals, I entirely agree.

Specimen of a Rhinolith. Shown by Dr. MILLIGAN.

Mr. LENNOX BROWNE: I quite agree with one point noted by Dr. Milligan—namely, the great difficulty often experienced in removing these rhinoliths, even when they are fully exposed. I have just now under my care the case of a retired judge of High Court, who is considerably over eighty years of age. He has had a rhinolith for something over eighteen months, but I have not yet succeeded in removing it—for each time the forceps are applied, with even slight traction, bleeding occurs, followed by constitutional disturbance. The other day, however, he sent me up a fragment that had come away, examination of which dispelled any doubt that might have existed as to the diagnosis.

Case of Polypoid Growth of Unusual Character from the External Surface of the Membrana Tympani. By Dr. PEGLER.

T. A., thirty-eight, came to the Central Throat Hospital, complaining of deafness, on the 14th November, 1895, under the care of Dr. Dundas Grant, to whom I am indebted for permission to read these notes. On examining the left meatus a fleshy mass was visible, resembling a polypus, amidst a good deal of dirty discharge.

On syringing the ear the growth detached itself, and subsequent inspection showed a small bleeding point of granulation in the anterior quadrant, close to its junction with the meatal wall. Hearing was improved, and there was no perforation sound on Politzerisation.

The growth, when removed, was about the size of a large pea. The sections under the microscope exhibit a fibrous struma, the trabeculae of which are arranged in a radiating direction, and enclose a number of spaces in which may be seen large, flat, multinucleated cells. There is a border of degenerated cell elements enclosed by a layer of horny scales, but no true epithelium. Scattered about in the sections are portions of the shafts of human hair, three or four such fragments being visible in the same field. More highly magnified, the tissue in which these are embedded consists of spindle elements and small round cells, the former interlacing in all directions. One piece of hair, longer than the others, shows clusters of leucocytes at each extremity and surrounding its shaft, as if engaged in a sort of phagocytic process.

Having thus described the main features of the sections, Dr. Pegler said he hoped those of the Fellows who had examined them would give

him the benefit of their opinion as to their nature, especially with reference to the presence of the hair and multinucleated cells. Mr. Wingrave thought that the growth was of a dermoid nature, the situation being a likely one for such to occur. The use of the term "dermoid" on the programme was, however, quite provisional.

MR. LAKE: I think Dr. Pegler makes a mistake, for in my opinion (and I think it will be the opinion of the majority of the Fellows) this is a case of an ordinary fibrous polypus, which has been twisted at its pedicle and simply come away. The absence of epithelium is due to necrotic changes, and the "multinuclear cells" are early altered clots in thin-walled vessels.

DR. MILLIGAN: I have examined the growth under the microscope, and I quite agree with Mr. Lake in his opinion that it is a section of an ordinary fibrous polypus. If one looks carefully at the hair under the microscope, one sees that there is tissue below it. The hair seems to me to be an extraneous object altogether. How it has got incorporated with the section I do not know, and should like to ask if any other sections contained hair.

DR. PEGLER: In reply to Dr. Milligan I may say that I have cut several sections, and found portions of hair in all. It is particularly interesting to note that in one of the specimens under the microscope there is a cluster of small round cells at either end of the piece of hair, suggesting that a sort of phagocytic action might possibly have been in operation. I am much obliged for the suggestion that the growth is an ordinary fibrous polypus, but scarcely feel in a position to accept it, as this diagnosis leaves the numerous large multinucleated cells unaccounted for. I think Mr. Lake is quite right that the absence of epithelium is due to necrotic change, and that the pedicle was twisted—accounting both for the necrosis and the fact that the growth came away on syringing. His explanation that the multinuclear cells are clots in thin-walled vessels I am afraid I cannot accept.

DISCUSSION ON ETIOLOGY OF NASAL OBSTRUCTION.

MR. MAYO COLLIER: Mr. President and Gentlemen,—I had intended to curtail my remarks in opening this discussion to afford a greater opportunity for those present to join in the debate, but since we have met here my resolution has been somewhat modified. I was under the pleasing delusion that many members of this Association were in possession of the main points of my arguments, but I find to-day that this is not so.

In justice to myself, and more especially for the benefit of the many visitors who have here honoured us to-day, I will go a little more fully into the subject than I had at first intended.

My first object will be to lay before you the facts and figures bearing on this subject, and to remind you, and prove to you if possible, how extremely common is some degree of nasal obstruction. This being done, or the fact being proven, I shall attempt to explain to you why this is so—or, in other words, why some degree of nasal obstruction is so

common. And, lastly, I shall point out to you the more direct results or common sequelæ of chronic nasal obstruction. I would suggest that after mastering these three points we shall be in a better position as surgeons to remove, cut away, or treat whatever is obstructing the current of air through the nasal passages.

You are aware that the normal nasal cavities are separated from each other by a perfectly vertical septum; that each nasal cavity is symmetrical with its fellow; and that a free stream of air should be capable of passing through the lower half or respiratory area of the cavities sufficient to supply the lungs with warmed, moistened, and filtered air, and to maintain the respiration of the body in comfort.

No one, so far as I am aware, has ever attempted to suggest that the proper and only physiological portal to the lungs is other than the nose. Nor, in fact, can one deny that the respiratory area, or lower half of the nasal cavities, is as much the highway to the lungs as the trachea. This being so, it seems almost incredible that nine out of every ten civilized human beings have some contraction, narrowing, or obstruction of this great portal and highway to the lungs. And yet it is so.

Out of 1050 patients indiscriminately examined by me at the North-West London Hospital, only 110 had normal noses—that is to say, fairly vertical septa and symmetrical nasal cavities. The ages varied from one year to eighty, but it was extremely rare to find any obstruction, unless due to temporary causes, below ten years. Further, in young persons before puberty we may expect to find a majority of normal septa. From these facts, and many others, we may infer that our nose troubles are not born with us, but that we cultivate them as we advance in years.

In the College of Surgeons there are 2152 dried skulls, and of these 1657, or 76·9 per cent., have deflections or other irregularities of the nasal cavities, in nearly equal proportions on both sides. I need not trouble you with a long list of observations, amounting to another 2000, by various authorities in this country, America, and the Continent; suffice it to say that their conclusions are much the same, and warrant us in saying that even in dried skulls there is some marked irregularity of the septum in three out of every four cases. This proportion does not, however, hold good or apply to aborigines or uncivilized beings. Both Sir Morell Mackenzie and Zuckerkandl found that about eighty per cent. of aborigines' nasal fossæ were normal.

I will read from what they say:—"Superior races show greater disposition to this deformity, for in 103 non-European crania it was present in only 23·3 per cent." Sir Morell says:—"From 438 symmetrical skulls only 22·6 per cent. were Europeans, the rest being Africans, aborigines of the American continent, Polynesian islands, Andaman Islands, the New Hebrides, New Guinea, Solomon Islands, and from the Island of Teneriffe."

H. Allen also examined 93 skulls of negroes, and found deflections or irregularities existed in only 21·5 per cent.

I think, then, without carrying the matter any further, these statistics tell an astonishing tale, which is this:—Obstruction is seldom or never congenital, rare below ten years, more common after puberty; that nine

out of every ten civilized persons have some irregularity or abnormality in the nose ; and that four out of five savages, aborigines, or uncivilized beings have normal nasal cavities. Now the next question that presents itself is, Why is this so? Can you explain to us the cause or reason of all this? *Vere scire est per causas scire?*

Having established the fact, then, that deflections, spurs, irregularities causing obstruction to the passage of air through the nasal cavities to the lungs, are very common, we shall best answer the next question, Why is it so? by looking at and studying the parts, and applying whatever anatomical and physiological knowledge we possess in solution of this problem, and not by flying to theories. Part of our anatomical knowledge is this, that the septum nasi is not a firm, stiff, and solid partition limited by an immovable framework of bone. On the contrary, the septum is an extremely thin, translucent, elastic partition, not designed to give support to the bones of the face and skull, but to act as a delicate support for mucous membrane and important structures contained therein. In support of this statement I would remind you that the septum nasi is frequently entirely absent without producing any serious consequences to the shape of the face and head, and may be destroyed in part or to a considerable extent by disease without even altering the external appearance of the nose.

On glancing at the diagrams you will see that the septum is an irregular hexagon, but for all practical purposes may be looked upon as a quadrilateral, and, further, taking an average of a great number, may be measured as a square whose sides are three inches long, giving a superficial area of nine square inches.

The importance of this measurement will become apparent presently.

The next anatomical fact that will help us to elucidate the question of "Why is it so?" is an examination of the cartilages and muscles of the nose proper, or external nasal organ. As you will see by the diagram, the nostril is a valve which, without living structures to regulate and preside over the opening, would admit the passage of air only in one direction, namely, in expiration.

Proof of this is afforded in deep chloroform or other narcosis, some cases of hemiplegia, lesions of the facial nerves, and other states.

The cartilages of the nose are so arranged as to afford rigidity with elasticity, and are disposed in the manner indicated on the diagram.

They are the upper lateral, lower lateral, and sesamoid cartilages, the remaining portions of the *alæ* of the nose consisting of fat and fibrous tissue.

These cartilages are acted upon and regulated by a double set of muscles, comparable to the intercostal muscles in so far as they run between cartilages and bone, are connected with the respiratory function, and are brought into play separately, according as inspiration or expiration is dominant.

These muscles are seven in number, and are divided into two sets, the dilators and constrictors, and the dilators again into ordinary and extraordinary.

The ordinary dilators are the *dilator naris anterior* and *dilator naris*

posterior. The reserve or extraordinary muscles are the pyramidalis nasi and the levator labii superioris alæque nasi—no insignificant or feeble structures. The compressors or constrictors are feebly represented by the compressor nasi, the compressor narium minor, and the depressor alæ nasi. The actions of these muscles are indicated by their names, but it would be as well to observe how great is the difference in the powers of the muscles that hold open or dilate the valve with those that close it.

And, lastly, I would direct your attention to the fact that in infants and very young children the conformation of the nose and fossæ is entirely different from that in adults (*vide* diagrams).

Up to ten years of age the nose is always hook-shaped and slightly *retroussé*, and the anterior nares and nasal fossæ wider in proportion than in adults.

As growth takes place the face lengthens, the nose becomes longer, and the openings of the anterior nares assume a position below the floor of the fossæ. The fossæ become narrower on account of the development of the turbinated bones. Added to all this, a marked increase in the erectile and spongy tissue found on the two lower spongy bones, the lower half of septum, and floor of the nose is coincident with the period of development between puberty and adolescence.

Now, you will naturally ask, How does the fact that the septum is thin and easily pushed aside or bulged, or the fact that the nose is a valve requiring muscles to keep it open, or the fact that as development takes place the passage for nasal respiration becomes naturally more narrowed, help us in solving this question? You will say, How on earth does this explain the production of chronic fixed states of nasal obstruction as illustrated by a marked deflection of the septum (the commonest form, by-the-bye), or an obstruction as illustrated by a polypus or turbinal varix? I say that there is an intermediate stage in the development of the state called chronic nasal obstruction, and that is temporary nasal obstruction.

And the temporary nasal obstruction, from whatever cause, tends to grow into, and become or produce, chronic nasal obstruction. Now, then, I must first show you how we may get temporary nasal obstruction, and then how this can develop into permanent or chronic nasal obstruction.

You will not deny that what is known as a cold in the head may affect a normal nasal cavity, and produce obstruction from turgescence of one or both turbinated bodies. You will not deny that a blow on the nose from a fall or other injury may temporarily annul or place in abeyance the power of the dilatores nasi to keep the valve open on one side or both.

You will not deny that there are many other causes or agents setting up a temporary dilatation of the erectile tissues of the nose, and so leading to obstruction on one or both sides. Now, my contention is this: block up one nostril—say from paralysis or paresis of dilators of nose, injuries, inflammations of cartilages, enlarged inferior turbinated bone, polypi, catarrh, or what not—and what is the result?

Now, the result will vary according as your subject is awake or asleep. When awake he can co-ordinate so far, that, by depressing the tongue in

the floor of the mouth, and raising the soft palate air can enter and equilibrate that in the lungs during inspiration, but not that in the closed nasal fossa. The rush of air passing under the naso-pharynx, and to some extent through the naso-pharynx, through the other open or partially open nasal cavity, will lessen the tension of and exhaust the air in the closed nasal cavity. The very sprays you use in everyday life are illustrations of this fact.

The wind, however gently it blows over the tops of your houses, draws out and exhausts the air in your chimneys, and so further exhausts and ventilates your dwellings. The simplest experiments will, however convince the unbelievers.

If a bent piece of glass with mercury in the bend be connected by a fairly thick elastic tube and inserted into the nostril, during every inspiration the mercury will fall in the one limb and rise in the other, to the extent of, perhaps, one inch or more. Now, what is the value of this observation, and how does it apply?

It applies in this way, that it proves without doubt that the stream of air passing out of the one nasal cavity into the lungs exhausts the air in the closed nasal cavity to the extent of one inch of mercury, more or less; and the value of the application is that now it is impossible for you or anyone else to deny that if one nostril be blocked up, from whatever cause, the air in that nostril is rarefied by the inspiratory act, and if rarefied the walls of that box are subjected to a pressure exactly in proportion to the amount of rarefaction.

For illustration, let the rarefaction be equal to a fall of an inch in the column of mercury in the manometer.

Well, the total weight of the atmosphere equals about twenty-nine inches of mercury at sea-level, and exerts a pressure of something like 15 lbs. on every square inch. One inch of mercury will, then, be equal to a pressure of about half a pound on every square inch.

I pointed out that the average area of the septum could be taken as nine square inches, so that we see from that that the comparatively large force of $4\frac{1}{2}$ lbs. may be exerting itself at every inspiration, not only on the thin septum, but on every side of the nasal fossa; on the face—hence the pinched and approximated upper maxillary bones in cases of long-standing nasal obstruction; on the palate—hence the high arched palate and irregular dental arch with crowded teeth; on the soft palate—hence the lessened pharyngeal and post-nasal space and the tendency to breathe entirely by the mouth, and many other attendant consequences. I say the force is more than sufficient, even when halved, quartered, or divided by ten, to account for all the damage done and distortion produced in the bony walls of the nasal fossæ.

The constant dropping of water will wear away the hardest rock; so a constantly slight pressure will bulge in the sides of the strongest living cavity.

During sleep more damage is done than during consciousness. Oral respiration is effected by powerful inspiratory efforts lifting the soft palate every time, so increasing the rapidity of exhaustion of the naso-pharynx by diminishing the width of the stream, and consequently increasing the

exhaustion of the closed nasal cavity. It is not hard to deduce in some cases a pressure of two or even three pounds on the square inch. Before dismissing this subject I would remind you of what Trendelenberg has pointed out, but ask you not to accept his conclusions but rather my explanations.

He has pointed out the frequent association of highly-arched palates and crowded irregular teeth with deflections of the nasal septum and obstruction, and asks you to believe that the palate pushes up and deforms the septum.

Jarvis has reported a series of four cases in the same family, and asks you to believe that they are hereditary. I ask Trendelenberg and Jarvis, What pushes up the palate?

I ask you to use your common sense, and note that the same incontestable force that pushes in the septum must of necessity push in the hard and soft palate, and there is no help for it. It would be contrary to the laws of nature if it did not do so.

Now, then, having established with almost mathematical accuracy, and, I trust, to your satisfaction, that obstruction to one or other nostril, continued for any length of time, is a fertile source and almost universal cause of bulging inwards of the various walls of the nasal cavity, I do not do so entirely to the exclusion of other causes.

What are the other possible causes? They may be—

1. *Congenital Causes.* I do not think that disease or injury affecting the infant in utero can be a very frequent or potent cause for damage to the walls of the nasal cavity. All the highest authorities say they have never seen a case. Zuckerkindl and Welker say that deflections are never found before the seventh and fourth years respectively.

2. *Syphilis.* Trelat asserts that many cases of obstruction are due to syphilis. Syphilis, I should say, can only claim to occupy a very secondary position as a cause of chronic nasal obstruction; it is much too rare, and its effects are much too rapid. Its effect is rather ultimately to cause a free ventilation of the nose by destruction of the septum and other parts. To syphilis I believe, in some cases, spurs, ridges, and exostoses are due.

3. *Rickets* has been said, and notably by Loewenberg, to be answerable for a large number of deflections. A part may be assigned, in a modified degree, to rickets in the same way as to syphilis.

I will not weary you with a detailed account of all the causes that have been at one time or another advanced to explain greater or lesser degrees of chronic nasal obstruction.

Their very names are sufficient to ensure for them a repudiation on your part, such as—

4. Habitually blowing the nose with the same hand.
5. Habitually sleeping on one side.
6. Tendency to vertical overgrowth of septum.
7. Primary laws of organization at fault.
8. Action of astringents.
9. Habit of putting the finger in the nose.
10. Overgrowth of component parts of septum.

11. *Traumatisms.* I am inclined to agree with Bosworth that traumatism is by far and away the most potent cause of obstruction in young people, next to catarrhs and engorgements of the erectile tissues of the nasal respiratory tract.

12. Injury to root or branches of facial nerves only so far as it can affect the dilators of the nose.

13. And, lastly, what is self-evident, swelling, tumour, new growths, polypi, hypertrophies, abscesses, foreign bodies, etc.

Here the cause is self-evident, but in the vast majority of cases these conditions are the effect of the obstruction in the first place, becoming afterwards an additional and aggravating cause. Lastly, gentlemen, as a corner-stone to my contentions, I will read a few lines, giving you the result of Ziem's experiments on artificially blocking one nostril in young animals. This will expel, I feel sure, the last glimmer of doubt from your minds—if doubt there still exists—of the efficiency of this great cause that I feel I have but too feebly contended for. Ziem has proved that every obstruction of the nose exerts widely-spread consequences on the development of the skull in young animals, one of whose nostrils he completely blocked for a long time.

There was a deviation of the intermaxillary bone and the sagittal suture towards the shut-up side, also lesser length of the nasal bone, of the frontal bone, and of the horizontal plate of the palate bone; less steep elevation of the alveolar processes, smaller distance between the anterior surface of the bony auditory capsule and the alveolar processes, also between the zygomatic arch and the supra-orbital borders; and smaller size and asymmetrical position of the vascular and nerve canals on the closed side of the nose.

The distance of the two orbits from the middle line was unequal, which, as has been observed in men, leads to asthenopia, astigmatism, and strabismus—or, in other words, gentlemen, the whole side of the face was squeezed in from all points by the unequilibrated atmospheric pressure due to the rarefaction of the air from within the obstructed nasal fossa, with a result that the whole side of the head is prevented from expanding or growing properly.

Temporary nasal obstruction, then, lasting for any considerable time, tends to produce, and does produce, collapse of the walls of the closed nasal cavity, and so chronic or permanent nasal obstruction.

Some degree of distortion of the face is common. A perfectly symmetrical face is rare. I submit to you that anterior and posterior hypertrophies, polypi, varices, catarrhs, etc., are more commonly a sequel of chronic nasal obstruction than a cause.

Before passing on to our third point, or the effect of these induced states, I would ask you to note, as supporting my contention, that the thinnest and most easily displaced or bulged side of the nasal box should, if my contention be true, be the one most often displaced and the cause of most obstruction, namely, the septum; and, as a matter of fact, it is so.

Now, I shall venture to enumerate to you the more common sequelæ and direct results of chronic nasal obstruction so induced or brought about.

and to each I shall affix the questions, How? and Why? and endeavour to answer them.

And, firstly, the commonest of all is dryness of the mouth and tongue in the morning.

The how and why in this case are not hard to answer; but I must here make a digression and issue a warning to you.

It is the rule that when a patient comes to you complaining of dryness of the tongue, mouth, and throat in the morning, that you will not find at the time of your examination any complete blockage of his respiratory nasal tract.

You will examine his anterior nasal openings, and you will as a rule find an enlarged anterior extremity of the lower turbinated body.

Expiration now may be perfectly clear, and your patient can blow out a lighted match with the apparently offending nostril.

If with these symptoms you will look carefully, you will observe on the septum a concavity or nest, into which the enlarged turbinated body fits during rest and sleep in the recumbent position. This is proof positive and pathognomonic of chronic nocturnal obstruction, which, as I have pointed out, is more potent for evil consequence than obstruction during the daytime. Of course, your dryness of the mouth and throat in the morning may be due to other causes; but the commonest cause of ail is enlargement of the erectile tissues on the lower turbinated bone known as turbinal varix.

Now, one word more before we pass on as to the method adopted of testing a patient's capacity to breathe through the nose, and its fallacies. Most persons adopt the erroneous method of lighting a match, placing a finger on the other nostril, and requesting the patient to blow the match out. This is no test at all, and a patient suffering from a marked degree of nasal obstruction may be quite capable of blowing out the match. May I recall your attention to what I stated *re* the valve-like nature of the nostril?

A muscular effort is required to admit air in inspiration (the more important event of the two), but not so in expiration; air can find its way out as it likes without danger to anything or anyone, and at all times and with few exceptions is nasal expiration possible even when marked degrees of nasal obstruction are present.

No; the proper test is to require your patient to close the mouth and to close the other nostril, and if he can exist for a minute or two without opening his mouth, then there is no material degree of obstruction, and, if not, there is.

Now to return to our list of consequences of chronic nasal obstruction. Arising out of the discomfort of mouth breathing follows often disturbed sleep, and, in children, nightmare, often amounting to trance.

Next, night cough, commencing a few hours after retiring to rest and lasting a considerable time, from the effect of cold, dry, and unfiltered air entering the larynx and trachea. Next, morning cough, which disappears during the day, to return regularly next morning accompanied with a good deal of glairy expectoration. This is again due to the irritation of the cold, dry, and unfiltered air, associated with engorgement and congestion of the mucous membrane of the trachea and larynx, due to the dry cupping

of the parts during abnormal and impeded respiration. Next, arising out of this, follows hoarseness, laryngeal and pharyngeal, as well as post-nasal catarrh—all due to the same causes. After an experience of fifteen years, seeing throat and nose cases at the hospital and in private practice, I make this general and bold statement: that patients do not get pharyngeal, laryngeal, or post-nasal catarrh often, or in a chronic or recurrent form, unless they are suffering from chronic nasal obstruction; and the only and permanent cure for these chronic or recurrent conditions is to ventilate the nose—restore to the patient the valuable physiological functions of the nose—and he will get well of his own accord, without further treatment.

Don't do so—don't restore to him his nose as a respiratory organ—and I venture to assert that whatever else you may do for him, you will not permanently relieve him.

Of course, syphilis, tuberculosis, and alcoholism are conditions easily recognized if apart from nasal stenosis, but are frequently associated with and intensified by chronic nasal obstruction, and are more easily dealt with and successfully treated by removing that condition. Next, enlarged, inflamed, and morbid conditions of the tonsils—oral, pharyngeal, and lingual—are constantly associated with chronic nasal obstruction. And why? The dry, irritated, and morbid condition of the mouth and adjacent parts must expose the tonsils to infection, irritation, engorgement, and consequent hypertrophy.

Next, deafness, dry catarrh of tympanum, suppuration of middle ear, with all its consequences, may be directly attributed to chronic nasal obstruction. I will give you the sequence of events. Chronic nasal obstruction, engorgement of post-nasal mucous membrane from the consequent dry cupping, accumulations of mucous decomposition and germ growth in same, blocking of Eustachian tube with catarrh and infection of tympanic passage and cavity, dry catarrh, abscess, perforation, etc. mastoid abscess, etc., polypus of ear, etc.

Next, polypus of the nose and naso-pharynx, anterior and posterior hypertrophies, spurs, ridges, and turbinal varices may justly all be put down to the chronic state of engorgement and irritation the parts are subjected to by the ever-present diminished nasal tension and want of ventilation.

Consequent on this it is easy to conceive that the accessory cavities of the nose may suffer; the engorged condition of the lining membrane of these cavities, and the consequent accumulation of unhealthy and decomposing mucus, may lead to abscesses, and accumulations in the antrum of Highmore, frontal, sphenoidal, and ethmoidal sinuses.

This is not theory. These conditions are constantly associated with chronic nasal obstruction, and we do not find these conditions without some degree of the same. Lastly, as secondary effects, pigeon breast, collapse of chest walls, lateral curvature of spine, chronic bronchitis, asthma and heart affections, headaches, and neuralgias are well-known accompaniments and results of chronic nasal obstruction. You will say my indictment is a pretty heavy one against chronic nasal obstruction, but had I time I could give you chapter and verse and illustration

of every accusation here made. One word more : do not forget the commonest effect of chronic nasal obstruction in young people, namely, pinched upper jaw, highly-arched palate, irregular and crowded teeth, with thin flattened face and prominent nose.

This is a typical picture of the effects of chronic nasal obstruction on the young.

Dr. MACNAUGHTON JONES : I should have preferred, sir, that an older member of this Society had risen to reply in the discussion on so important a subject as this. Of course, we are all agreed that there is, perhaps, no more important topic connected with the organs of special sense, and with other functions in the body, than the proper ventilation of the nose and the free passage of air through the nasal cavities. I must confess, on hearing the conclusion of Mr. Mayo Collier's remarks, that I was reminded of Mr. Jerome K. Jerome's visit to the British Museum, and we might come to the conclusion that every ailment of the body, with the exception of housemaid's knee, was due to an obstructed nose. But, sir, I think we may limit our discussion to those effects which are more commonly observed as a result of turbinal hypertrophy and other deformities of the nasal fossa. I think we are all agreed in regard to (and it would be simply waste of time that we should stop to discuss) the effects of nasal obstruction on the ear, and those consequences which arise through reflex influences which produce such symptoms as vertigo and tinnitus. I believe that there is an intimate connection between these turbinal hypertrophies and various neuroses, which are, as in the case of the eye, often attributed to other causes, and not to the nose, from the simple want of a careful exploration of this organ. It is a well-known fact, which long ago was observed by Catlin, that the Indians among whom he travelled were singularly free from deafness, and he found that these Indians were remarkable for their keen sense of hearing as well as smell ; their noses were patent, and that patency was due to the fact that the mouth was carefully closed by the mothers, and the children were forced to breathe through the nasal passages instead of through the mouth. This would to a certain extent support Mr. Collier's contention with regard to congenital causes alone not producing deformities in the naso-pharynx. I must confess I am not alarmed by the view that has been advanced as evidence of the gradual deterioration of the human race that the nose is slowly altering, and that in the process of time we shall have a nose with which it will be absolutely impossible to breathe naturally ; I think that, seeing how slowly the forces of heredity often operate, it is not sufficient to be told that if up to a certain time after birth the evidences are absent of the existence of congenital causes, such influences may not be at work in producing certain shapes and deviations which have existed in the parent.

I am not altogether convinced, even with the geographical analogy which Mr. Collier has advanced, that a certain number of these cases do not find their origin in hereditary forces which are in operation. I think another point which he has referred to is one that is known to all of us, viz., that the greatest mistake anyone can make is simply to test a patient by getting him to breathe through the nose. There is only one way to tell

how far the nasal passage is patent, and that is by careful examination of it. Many a patient with an obstructed nostril and with a blocked passage will force air perfectly through the nostril, and also inspire through it; and it is not until we have made a careful exploration of the turbinals that we can see really whether there is obstruction or not. I am bound to accept certain statistics with regard to civilized and uncivilized communities, but they have certainly come upon me rather with surprise. Mr. Collier said deflection of the vomer was extremely rare. Now, I am not so sure that that is the case; at any rate, in a number of cases that I myself have examined I have found such deflection. I think that after traumatism we frequently find deflection of the vomer. Therefore, I do not altogether accept his definition of a normal nose.

I certainly do not think that in any case one can really judge as to whether there is such obstruction as will affect the ear or other organs by the degree of breathing, or the statements of the patient, himself or herself.

As regards the secondary cerebral complications, there are, of course, a great many things to discuss, and the ground that would have to be travelled over in considering the consequences of nasal obstruction is so vast that it is very difficult to condense into a few minutes what has to be said. But I feel this, that in a large number of these cases of turbinal hypertrophy, and in chronic hypertrophic rhinitis, that vertigo, temporary loss of memory, and the various other cerebral conditions with which we are familiar, are due absolutely to turbinal enlargement and nasal obstruction. I think that we may broadly say this, that in any case where we find marked deviation of the septum and turbinal hypertrophy, that it is absolutely necessary to take such steps, therapeutic or operative, as will free that nasal passage. I am quite convinced, after a long experience in aural work, that a very large proportion of aural diseases do begin absolutely in the nose, and we are beginning at the wrong end when we treat the ear if we do not at the same time treat the nose. But I also think that, having regard to the intimate association of the nerves of special sense, and remembering the various reflexes which we find following upon affections of the organs of sight, hearing, and speech, we may sometimes run a little to the other extreme by interfering with the nose unnecessarily by operative measures. I allude to those conditions which would yield to ordinary medication or ordinary therapeutic remedies. Exactly similar symptoms to those following nasal obstruction may arise out of astigmatism, which ocular condition may be overlooked. This ocular complication I have seen several striking instances of, and the possible refractive sources of these symptoms should be remembered.

Dr. MILLIGAN: I have been much interested in Mr. Collier's paper, and there are one or two points about which I should like to speak. In my experience, traumatism does not seem to play such an important part as would seem to be the case from what Mr. Collier has said. In my opinion, constant and repeated tendency to nasal catarrh has a great deal to do with obstruction, and that brings into question the case of heredity. I believe that parents hand down to their children the tendency to repeated catarrhal affections of the nose or larynx, and these frequently-

repeated attacks of catarrh in the nose induce this condition of aspiration, and hence many of these lesions which one finds, such as deflected septum and formation of nasal polypi, etc.

I should like more particularly to refer to the effects of nasal obstruction upon the ear, and I quite agree with what Dr. Macnaughton Jones has said as to the enormous importance of examining and treating perverted conditions of the nose at the same time that the ear is being attended to. Post-nasal obstruction appears to me to exert a more baneful influence upon the condition of the ear than does nasal obstruction. It must be within the experience of many of the Fellows that numbers of patients suffering from nasal polypi have perfectly healthy organs of hearing. On the other hand, where one gets naso-pharyngeal disease, the ear is prone to be involved; and I think it is the duty of every surgeon to make a careful examination of the vault and the lateral walls of the naso-pharynx before commencing any special treatment of the ear itself. In connection with the secondary effects which nasal obstruction produces upon the ear, I have been much interested lately in noting the frequency with which suppurative affections of the "attic" are associated with adenoid disease of the naso-pharynx. One may detail many other conditions of the ear which in like manner are dependent upon post-nasal disease; and the moral one derives from a consideration of this subject is that in all ear cases the nose and the naso-pharynx should be carefully examined. I believe that syphilis plays a somewhat important part in the production of nasal obstruction—especially the congenital forms of the disease. I recently had under my care a most typical case of aprosexia, occurring in a girl sixteen years of age. She not only had the facial deformity which one expects to follow nasal obstruction, but she had also that peculiar sluggish condition of her brain which is such an important symptom of this affection. The nasal lesion found was an enormous hypertrophy of the mucous membrane covering the inferior and middle turbinated bodies. This patient had undoubtedly the symptoms of congenital disease. It was remarkable to note the effect the treatment had. After the nasal functions had been re-established the girl's mental condition began to clear up, and she became brighter and appeared to enjoy life considerably. I have seen several other cases of a similar nature, and am disposed to look upon syphilis as an important predisposing factor in producing several states of nasal obstruction.

Dr. HARRY CAMPBELL: I fear I have not much to add that will be of value to the members here present, but I thought that a few observations on this important subject from a general physician might not be wholly devoid of interest. Speaking for myself, I feel I owe a very great debt of gratitude to those gentlemen who have devoted so much time to the study of special diseases, and I venture to think that every physician should know something about the surgery of the nose. I will give an instance of the importance of such knowledge. Quite recently a boy of thirteen was brought into the hospital in great distress. When I saw him he was blue in the face, and in a condition of marked orthopnea. One of the first things that struck me about him was that he was a mouth breather, and the whole history of the disease at once

flashed across my mind. Here was a case, I argued, of nasal obstruction leading on to bronchitis—emphysema, dilated right heart, and all its consequences supervening. On examination, I found my supposition confirmed. His teeth were very irregular, and the palate was remarkably high; and there could be no doubt that his troubles were, in great measure, due to long-standing nasal obstruction. There was a great crop of adenoids at the back of the nose, and after removal of these the case made very good progress. Here, then, is a good instance of the physician's obligation to nasal surgery.

One of the most remarkable points about nasal obstruction seems to me to be this, that our knowledge of it all is so recent. Cohnheim, in his magnificent work on diseases of the respiratory organs, contends that nasal obstruction leads to no other evils than dryness of the throat and nasal voice, and, in the case of children at the breast, difficulty in sucking. Now, the fact that so great an authority as Cohnheim should have written thus a few years ago shows the enormous advance we have made in our knowledge of nasal disease. I am now going back to a physician who lived nearly two thousand years ago. I refer to Galen. Some time ago I had occasion to study this old physician's writings rather carefully, and I came upon a passage to the effect that *headache is frequently met with in subjects who have high arched palates and irregular teeth*. That strikes me, and I think it will strike you, as being a most interesting observation. High arched palates and irregular teeth, we know from Mr. Collier—and I may confess I am a humble disciple of Mr. Collier's doctrines—mean nasal obstruction, and nasal obstruction means aprosexia, of which headache is a common symptom.

I personally do not agree with Mr. Collier that the element of heredity does not enter into the causation of nasal obstruction. Even assuming this condition is not congenital, it is very dangerous to wholly eliminate heredity from its production. My own opinion is that medical men have not yet realized the important part which heredity plays in disease. It cannot be eliminated from the causation of any disease. I could prove to you that a broken skull may be hereditary; but, without wishing to push the point too far, we may say that all diseases which are not purely accidental are hereditary, or may have an element of heredity in them. As Dr. Milligan has so well pointed out, the element of heredity in nasal obstruction may operate by predisposing an individual to catarrh.

Mr. Collier has told us that he has examined a large number of children for nasal obstruction, and has practically never met with a case under eight years of age. He has also said that high palates are practically always due to nasal obstruction. Now, high palates are not uncommon in children under eight. How, then, is Mr. Collier going to reconcile his two propositions with this fact? It would be interesting to have the opinion of members as to whether a high palate occurs in congenital syphilis. I can recall a typical case of this disease in which the patient has Hutchinson's teeth, a narrow pointed jaw, and a high palate. My impression is that this combination is frequently observed in congenital syphilis, the pointed jaw and high arch resulting from the

nasal obstruction so common in syphilitic children. I have, however, made no systematic observations on this point.

DR. SCANES SPICER : My thanks are due to this Society for inviting me to be present at the reading of Mr. Collier's vigorous and suggestive paper, and I may say at the outset that my personal experience agrees with most of his statements on this still imperfectly appreciated problem. At this late hour any detailed examination of his paper is impracticable, but there are one or two points to which I should like to refer. First, with reference to the share taken by the neuro-muscular mechanism of nasal inspiration as a more or less common *primary* factor in the pathogeny of chronic nasal obstruction. That the innumerable—even if not gross—traumatisms to which the growing nose is subject in the erect human may place the dilator mechanism of nasal inspiration *hors de combat*, and thus by creating a condition of anterior stenosis lead (through the well-known physical agencies of variations in atmospheric pressure and the suction-pump action of inspiration on the nasal air) to intra-nasal conditions which overshadow as proximate causes of stenosis the primary factor, seems to me eminently reasonable, and worthy of more extended consideration than it has yet received. In common with many other rhinologists, I have been in the habit of giving more weight to the *direct* action of traumatism in producing deviations of the septum and dislocation of bones and cartilages, and in initiating inflammations which become chronic and lead to various hyperplastic states, these latter in their turn aiding the physical agencies above referred to in aggravating the conditions of hyperplasia and stenosis.

Secondly, I cannot agree with Mr. Collier in excluding heredity as an influence in the production of nasal obstruction. The tendency of any progenitor to reproduce in the offspring features similar to the parent cannot be gainsaid, and it is well known that that form of nasal obstruction which depends on narrow cavities, with thin, narrow, prominent noses, is found in different generations and members of the same family ; so that in any such case actually before us we cannot deny that, as the shape of nose is inherited, its proneness to be obstructed (from its shape and dimensions) is indeed a hereditary factor in causation, and has to be surmounted in treatment of such an individual case, although it is not a first cause of the origin of nasal obstruction in the race.

In the next place, Dr. Harry Campbell questioned Mr. Collier's remark that nasal obstruction was unknown under the age of eight years. I understood the author to mean organic nasal obstruction, such as bony thickenings—not chronic obstructions due to catarrhal swelling, hyperplasia of soft tissues, or traumatic displacement of cartilages. At all events, according to my experience, such latter conditions are common at very much earlier ages, and I have operated more than once on children of two years of age for adenoid growths of an aggravated kind.

Lastly, Dr. Harry Campbell asked whether there was a frequent association between congenital syphilis and vaulted palates. I should like to add that in my experience this is not the case.

THE PRESIDENT : With regard to the existence of syphilis as a cause

of chronic nasal obstruction, I think Mr. Collier failed in that he did not discriminate between acquired and congenital syphilis. Nobody can for one moment deny that congenital syphilis is a very strong and a very common factor in the cause of nasal obstruction. I think that acquired syphilis, inasmuch as it destroys the tissues of the nose, and very often brings about an atrophic condition, may be excluded as the cause of chronic nasal obstruction. With regard to heredity, that is a very difficult question to enter upon; and it is just possible that the conditions which cause obstruction in the nose of the parent may equally apply in the case of the child, and as far as heredity of surroundings goes it may be quoted as a cause. As to traumatism, I think very often chronic nasal obstruction is due to an injury of some kind to the child in early life, and especially that form of chronic nasal obstruction which is due to a deflected septum. It is very interesting to have notes as to the mental conditions which so often surround these cases of chronic nasal obstruction. There is nothing more painful to us than the condition of children who have post-nasal growths: their loss of memory, their want of that spontaneous vivacity which is natural in young people, the absence of power of application to their studies, and many other circumstances which surround and prejudice their lives. These are entirely altered when the obstruction is removed. I think we shall agree that the mental conditions which surround chronic nasal obstruction are most marked, and form, perhaps, by their removal, one of the most satisfactory aspects of our operative treatment.

PROCEEDINGS OF THE LARYNGOLOGICAL SOCIETY OF LONDON.

Annual General Meeting, January 8th, 1896.

FELIX SEMON, M.D., F.R.C.P., *President, in the Chair.*

Case of Bulbar Paralysis, Progressive Muscular Atrophy, Complete Paralysis of Left Abductor, Paresis of Right Abductor. Shown by Dr. F. SEMON.

J. S., labourer, aged fifty-four. The patient is an inmate of the Queen Square Hospital for Epilepsy and Paralysis, under the care of Dr. Hughlings Jackson, F.R.S., who kindly allowed Dr. Semon to show him. Duration of illness, about fifteen months. After influenza, in October, 1894, a difficulty in swallowing and articulation was noticed: this was soon followed by progressive weakness of movements of right arm and leg. In September, 1895, the same process began in limbs of left side. Ever since, gradual progress of affection. The muscles of the hands, particularly of the right, are much wasted. There is no power over the explosives in articulation, and he cannot pucker up his lips well. The

right orbicularis oris et palpebre is weaker than the left; the right pupil larger than the left. There is fibrillary twitching in the thigh and calf muscles. The pharyngeal reflex is diminished on the right side more than on the left. On phonation the palate is drawn up a little to the right. No affection of sterno-mastoids and trapezii muscles. The movements of the tongue are performed with some difficulty, the organ is considerably wasted, and there are tremors on movement. He loses breath when walking quickly, and has occasionally slight choking attacks.

On November 12th, 1895, Dr. Semon made the following note:—“During quiet respiration the vocal cords stand nearer one another than under normal circumstances, the distance being about 4 millimetres. On deep inspiration no further opening of the glottis takes place, but, on the other hand, the cords are not sucked together. The movements of the left vocal cord are distinctly more defective than those of the right. On phonation, complete closure of the glottis occurs.” On December 19th it was seen that the abductor paretic of the left side had advanced into total abductor paralysis, and that the free borders of both cords appeared slightly excavated. Since then no changes have occurred.

Mr. SPENCER, basing his remarks on his experiments upon monkeys, as well as on the results of other observers, maintained that although the case was one of a widespread lesion, yet if any localization could be made it would be one of the lesions, viz., that which produces difficulty of swallowing. The difficulty in swallowing, the paralysis of the lower face, and the paralysis of the abductor fibres, all agreed with a lesion some distance above the *calamus scriptorius* in the floor of the medulla. On the other hand, the freedom of the tongue, of the abductor fibres of the larynx, and of the muscles of the neck, indicates that the lowest portion of the floor of the medulla and the upper end of the spinal cord is not involved.

The PRESIDENT, in reply to Mr. Spencer, stated that it was impossible to fully discuss the large question as to the ultimate supply of motor fibres to the larynx in the course of the present discussion, and that he hoped, at no distant date, to more fully enter upon this important subject. All he could say at present was, that whilst fully admitting the force of the anatomical researches made by Spencer, Grabower, Grossmann, and others, he did not yet see his way to reconcile the resurrection of the view that the vagus supplied the motor innervation of the larynx with a large number of well-ascertained clinical facts; and that in view of the frequent changes of opinion concerning this question which had taken place from the beginning of this century to the present time, he thought it wiser to keep his mind quite open on this question. One thing, however, appeared clear to him, viz., that cases like the one brought forward by himself were not calculated to elucidate this question. A disseminated lesion, or one extending over so large a tract as undoubtedly present in this case, was open to so many interpretations that, from the clinical point of view alone, it seemed to him impossible to argue from it for the correctness of either view. It was in cases rather like those brought forward by Hughlings Jackson, Stephen Mackenzie, and others, in which there was associated lesion of one half of the tongue, one half of

the palate, the corresponding vocal cord, and the corresponding sterno-mastoid and trapezial muscles—or in cases such as reported by Gerhardt, in which clonic spasm of the last-named muscles was associated with twitching movements of the corresponding vocal cords—that conclusions as to the innervation of the larynx seemed justified: and such cases did not seem to him to speak in favour of Spencer's views.

Case of Excision of Larynx; Myxo-Chondroma of Larynx. Shown by Dr. BOND.

This patient, a man of fifty, had the whole larynx removed in September, 1892, save the epiglottis and the posterior and superior borders of the thyroid cartilage. The cricoid cartilage, with the growth in lumen on it, weighed $11\frac{1}{2}$ drams, and was portrayed in the *Lancet*, June 3rd. 1893. Eight days after operation the patient was able to eat a chop. The patient has now worn his artificial larynx for thirty-nine months, and is in robust health. He presents no sign of recurrence. His voice is good. The case was shown at the Clinical Society in 1893.

Case of Complete Excision of Larynx for Epithelioma: Numerous Glands Removed. Shown by Dr. BOND for Mr. HARVEY.

Tracheotomy was performed on this patient in July, 1894, for laryngeal obstruction due to an epitheliomatous mass affecting right cord, etc. The patient at that time declined a radical operation. On August 14th, 1894, the whole larynx was removed, but the epiglottis left. Numerous glands were removed from both sides, most of them through the operation wound; but separate incisions were made to remove others. After the operation the patient was for a time in a miserable condition, owing to the large flow of saliva through the upper part of the wound. Finally, two plastic operations were performed, and the gap above the site of the artificial larynx opening closed up. The operation was performed seventeen months ago. The patient now wears an artificial larynx without reed, can speak well, swallows solids and liquids without difficulty, looks in robust health, and states that he can follow his employment as well as he could before the operation. The larynx, on removal, was found extensively affected on both sides. Patient is now fifty-one years of age. At present there is no recurrence.

Dr. BOND, in reply to Dr. Dundas Grant, said the sub-perichondreal operation was performed.

Case of Clonic Spasm of Pharynx and Soft Palate. Shown by Dr. BOND.

This patient, a man of thirty-three, came to the Throat Hospital, Golden Square, on account of deafness. Both mallei were found adherent to promontories.

On examining throat the back of pharynx was found to move in a rhythmical manner, horizontally to the left and back again, and at the same time the left side of soft palate was drawn up and then relaxed. The larynx was not affected. Patient could give no history of the malady, as he thought his throat was quite healthy. There was no

clicking heard by patient himself or by others. It is a case of so-called chorea of the pharynx, but the name is an inappropriate one.

Dr. CLIFFORD BEALE thought the case should not be described as one of chorea, as the movements were so very unlike those of chorea.

Dr. BOND, in reply, stated that he had seen a somewhat similar case in which a small tumour of the medulla was afterwards found.

A Large Nasal Polypus Removed from the Naso-Pharynx of a Man aged Thirty-two. Shown by Dr. A. BRONNER.

In this case there had been nasal obstruction for two or three years, and for some months the patient had seen a round tumour projecting below the soft palate. The tumour was removed through the mouth by forceps. It was four inches long. The mucous membrane of the nose was slightly thickened, but there were no other polypi or polypoid degeneration.

Mr. CRESSWELL BABER had several times seen these post-nasal polypi occurring singly, and found that they often did not recur after removal.

Case for Diagnosis. Shown by Dr. COUPER CRIPPS.

William S., aged fifty, presents a smooth elastic swelling, about half the size of a large walnut, on the left side of the thyroid cartilage, extending over the middle line. The patient has been aware of its presence for several years, and it has noticeably increased during the last two. The larynx appears normal, but there is considerable enlargement of the lymphoid tissue at the base of the tongue and some chronic naso-pharyngeal catarrh.

Mr. BOWLBY exhibited a similar case at the last November meeting, which was considered to be either a thyroid or hyoid cyst.

Mr. C. SYMONDS thought the swelling was either a thyroid or a hyoid cyst.

Microscopical Section of Regenerated Tissue after Turbinectomy in Patient Shown at Last Meeting. Shown by Dr. W. HILL.

Mr. CRESSWELL BABER thought that the specimen consisted of a hypertrophy of the remaining tissue.

Mr. C. SYMONDS did not think that any regeneration had taken place, but rather an overgrowth of what was left.

Dr. PEGLER thought the cylindrical epithelium was of an oedematous character, but also pointed out that the subepithelial connective tissue was in a similar condition, and probably also the ill-developed muscular wall of the sinuses. He ventured to think that the opinion he had given of the case when shown was so far verified by this section.

Two Cases of Tubercular Laryngitis, in which Complete Recovery took place. Shown by Dr. DAVID NEWMAN.

J. P., aged twenty-nine, came under Dr. Newman's care in January, 1889, for impairment of the voice, which commenced at the beginning of September of the previous year.

When first seen the voice was soft, very weak, and aphonic; but occasionally it suddenly broke into a falsetto note, which was sometimes

maintained for a few minutes. The patient had had three slight attacks of hæmoptysis. The quantity of blood lost was never more than a few drops at a time. The expectoration was composed of a greyish-white, semi-transparent, muco-purulent material, which frequently contained large numbers of tubercular bacilli. It was at no time profuse.

On examination, the epiglottis and the mucous membrane covering the arytenoid cartilage on the left side presented the characteristic appearance of tubercular laryngitis. The vocal cords were normal in appearance, but the mucous membrane of the larynx was at one point studded over by numerous miliary tubercles. There was no objective or subjective evidences of tubercular disease elsewhere than in the larynx. The patient complained of considerable difficulty in swallowing, and on account of the pain had been prevented from taking a proper amount of nourishment. Emaciation and anæmia were marked; temperature was practically normal. Appropriate treatment was adopted and the patient carefully watched, frequent examinations being made of the sputa, larynx, and lungs. In May, 1889, physical signs developed indicative of pulmonary phthisis on the left side.

The second case in many respects resembled the one just described, it also being a case of primary tuberculosis of the larynx, in which the lungs became involved secondarily.

The patient, W. B., aged nineteen, a tall, slim lad, presenting the characteristic physiognomy of a tubercular patient, came for consultation in June, 1887. The previous February he noticed that his voice was very easily fatigued, and that if he spoke much, even in a quiet way, he became slightly hoarse. When first seen the hoarseness had developed into complete aphonia: dysphagia was very marked, the pain being so severe that he was unable to take solid food, but fluids could be taken without great difficulty; cough was short and dry, and expectoration was small in quantity, but very viscid. Occasionally he suffered from sudden attacks of dyspnœa.

On examination, the mucous membrane of the pharynx, palate, and larynx was very anæmic, while the margins of the pillars were of a bright red colour. The epiglottis was greatly indurated, and there was some thickening of the arytenoid mucous membrane, with ulceration of the right vocal cord. The sputa was sometimes free from tubercular bacilli, but the majority of specimens examined contained large numbers of these micro-organisms. The only indications of pulmonary tuberculosis were slight moist rales at the right apex in front, and a marked prolongation of expiration over the upper third of the right lung.

In both these cases the larynx was examined previous to any pulmonary signs presenting themselves, and in both a physical examination of the chest showed the lungs to be ultimately implicated.

The treatment adopted in both cases was a carefully regulated diet. The patients were kept in a warm, moist atmosphere, impregnated with menthol, terebine, and eucalyptus. The principal local treatment was spraying the larynx with cocaine, and when sufficient anæsthesia was so produced the larynx and pharynx were freely sprayed with a concentrated solution of iodoform in equal parts of alcohol and ether.

This was repeated, at first twice daily, and subsequently three times a day. At first the patients complained a good deal of the irritation of the applications, but after a few days they experienced so much benefit from the spray that they were willing to have it used as frequently as was desired. Codeia combined with nepenthe was occasionally given to relieve cough, and the general treatment of tubercular laryngitis was carried out. In both instances the dysphagia became less pronounced, the voice improved in strength and tone, and the patient began to gain in weight.

Dr. Newman has employed the iodoform spray in a considerable number of cases of tubercular laryngitis, and in almost all considerable relief has been experienced; but these are the only two in which a cure has been effected. The patients are now to all appearance perfectly healthy. The laryngeal condition in both cases is so much improved that it was very difficult to discover the remnants of the old lesion when the larynx was last examined. In the first case, the only distortion is a puckering of the epiglottis, and an undue paleness of the mucous membrane over the left arytenoid cartilage.

It may be remarked that when the larynx is sprayed with the iodoform solution, the odour of the iodoform can be detected in the breath for fully six hours after the application is made. To be efficient the iodoform treatment must be adopted before ulceration of the mucous membrane has set in.

Case of Epithelioma of the Left Tonsil, Left Posterior Pillar, and Uvula. Shown by Dr. DAVID NEWMAN.

Mr. A., aged fifty-five, farmer, consulted Dr. Newman in June, 1890, for a swelling in his throat and pain in the left ear lasting four weeks. Dr. Newman had seen him two years before for a simple tonsillitis. On examination of the tumour in the throat it was found to involve the upper third of the left tonsil, where it originated, as well as the posterior pillar and the left side of the uvula.

From the appearance of the growth it was at once considered to be an epithelioma; this was confirmed by a microscopic examination, and the tumour, with a good part of the surrounding healthy tissue, was excised within twenty-four hours.

The patient made a good recovery, and no recurrence has taken place till now.

Case of Carcinoma of the Tonsil and Soft Palate. Shown by Dr. DAVID NEWMAN.

Mrs. L., aged fifty-one, was admitted into the Glasgow Royal Infirmary on the 20th November, 1891, suffering from a carcinoma of the left tonsil and soft palate.

The history of the case showed that fifteen weeks previous to admission the patient for the first time noticed a difficulty in swallowing, which soon became very painful, especially on taking hot food. On admission the patient appeared fairly healthy, but stated that during the last three months she had been losing flesh and weight. She complained of little or

no pain in the throat unless when swallowing, but great pain at times in the left ear. This pain never affected her till after the throat symptoms had developed.

On examination, the left tonsil was found to be swollen and ulcerated. The ulcer extended from the tonsil to the anterior pillar, and to the margin of the soft palate and uvula. There was not much enlargement of the tonsil, nor were the lymphatic glands involved. Carcinoma was suspected, and confirmed by an immediate microscopic examination. Within half an hour, tracheotomy having been previously performed, the tonsil was excised. A free incision was made with the electric cautery, and the tumour, together with a considerable portion of the surrounding healthy tissue, was removed.

The wound healed in about three weeks. Now the patient is well.

Mr. C. SYMONDS congratulated Dr. Newman on his success, as operating in these cases was not usually successful. He would like to ask Dr. Newman how he operated, and whether it was possible to do so through the mouth alone. In these cases recurrence so frequently occurred in the glands that he had determined to always dissect out the side of the neck, whether there was any glandular enlargement or not.

Mr. DE SANTI thought that one case was sarcoma and the other epithelioma.

Dr. C. BEALE remarked that the recoveries from tubercular laryngitis were very few, and usually in those cases in which the lung tissue was also slightly improving.

Dr. NEWMAN, in reply, stated that the growth was small, and that he removed it in one case under cocaine, together with a large amount of healthy tissue, through the mouth with the galvano-cautery; the other case was done under chloroform and with the cautery. He thought they were adeno-carcinomatous, and in answer to Dr. Pegler said that he called them adeno-carcinomatous as they resembled the type of carcinoma formed in the mamma. In reply to Mr. Spencer, he stated that he sprayed the iodoform solution three times a day; at first it was done by himself and afterwards by a nurse, who, with a little trouble, was taught to do so efficiently. In reply to Dr. Spicer, he stated that the solution was composed of equal parts of ether and alcohol, with as much iodoform as this would take up.

Case of Abductor Paralysis with Laryngeal Crises. Shown by Mr. C. A. PARKER.

W. W., aged thirty-two, a porter, was first seen on November 26th, 1895. He gave the following history:—

Between three and four years ago he woke up during the night with difficulty of breathing, coming on quite suddenly, and accompanied by a violent cough. Inspiration was very noisy, like whooping-cough. The dyspnoea became worse and worse, and his limbs began to twitch, when suddenly he fell back unconscious and motionless. His wife states that he remained unconscious about two minutes, that he did not become cyanosed, but was perhaps rather paler than usual. When he recovered consciousness he could breathe quite well. He has had about five other

exactly similar attacks at intervals of about six months. The last one occurred during the day whilst at work, and was preceded by a tickling sensation in the throat; all the others were during the night.

On examination of the larynx the left vocal cord was seen to be fixed in the middle line, whilst the right was parietic, not abducting beyond the cadaveric position. Phonation was normal.

No knee-jerks could be elicited. Gait slightly unsteady. Tottering on standing with feet together and eyes closed. Some difficulty in walking along a line and in walking backwards. Argyll Robertson's phenomenon not present. No loss of sensibility.

There is a distinct history of syphilis.

Whilst under observation the patient has had no further laryngeal crises, and the condition of the cords remains the same, but the tabetic symptoms are more marked. He now complains that he cannot walk steadily, that his feet are cold and numb, and he is suffering from lancinating pains in both legs.

In this case we may note :—The first symptoms of tabes was evidently the laryngeal crises. The length of time between first attack and other tabetic symptoms. The vocal paralysis is only of left vocal cord. Will the right cord pass from paresis to true paralysis?

The PRESIDENT stated that Mr. Parker's observations deserved particular consideration, as showing that in tabes laryngeal symptoms may precede every other symptom; and therefore in these cases the reflexes should be always examined.

Dr. WATSON WILLIAMS asked if in this case the pulse rate was regular. He considered that an irregular pulse rate in association with laryngeal paresis pointed to tabes. He had recently had a case illustrating this.

Microscopical Sections of Warty Growth of Suspicious Nature on Left Vocal Cord. Shown by Dr. SCANES SPICER.

The patient, a man aged fifty-four, was shown at the November meeting of the Society. The growth was removed, under cocaine, with Mackenzie's cutting forceps at second sitting. After a fortnight the voice was strong, and showed a slight roughness only: the cord moved well, though still reddened, and a slight white projecting point marked site of attachment.

The histological report by Dr. T. H. R. Crowle, surgical registrar at St. Mary's Hospital, is as follows :—

"The tumour was round, measuring one and a half millimètres in diameter, firm, and of pinkish colour: to it was attached a small portion of mucous membrane.

"Microscopical examination shows it to consist of fibrous tissue in various stages of development, but for the most part fully formed; in it there are numerous capillaries, and around these are collected small cells. On the right of the section is an area consisting almost entirely of these small cells, which are evidently of inflammatory origin. The attached mucous membrane also shows collections of small cells beneath the epithelium.

"There is no trace of epithelial cells in the nodule, and the mucous

membrane shows no irregular proliferation of the covering epithelium. The epithelium does not pass over the surface of the nodule, but ends abruptly on each side, and on the right it is folded back on itself. The nodule also appears to be more or less isolated from the mucous membrane. These appearances are probably due to the forceps used at the operation having squeezed the nodule out of its bed. Although the epithelium probably extended over the nodule for some distance, I do not think that the surface was entirely covered by it.

"The nodule is evidently of inflammatory origin, and the inflammation must have been very chronic and of long duration to produce fibrous tissue such as that found in the nodule."

Fibroma (? Fibro-Sarcoma) of the Cartilaginous Septum. Case and Microscopical Specimen. Shown by Dr. STCLAIR THOMSON.

This case was brought forward as in some way a pendant to the one shown by Mr. Stewart at the last meeting ("Proceedings," page 30), although in the present instance members might decide that the growth was distinctly malignant, and not a simple fibroma. M. N., aged twenty-nine, on 28th October last sought advice for nose bleeding. Two years previously he had had blood-spitting on and off for three months, and had been treated for chest disease. He had three attacks of epistaxis during the year 1895, and at odd times in previous years. Had not noticed difficulty in nasal respiration. An irregularly ovoid, lobulated growth was removed from the right middle meatus with a snare. It grew by a fairly thick pedicle from the centre of the cartilaginous septum. The free hæmorrhage had to be controlled with the galvano-cautery. A week afterwards the base was touched with the cautery, and at his third visit, two weeks later, there was distinct proliferation of the root. The growth had by this time been cut; and although some skilled pathologists held it to be a simple growth, others took it to be distinctly sarcomatous. Taken in conjunction with the recrudescence, Dr. Thomson inclined to the latter view. Thinking that the cautery might have an irritating action, the stump had been touched with chromic acid. It still tended to sprout, so that a month ago it was, for the last time, freely seared level with the surface by means of the galvano-cautery. Members would now see that after four weeks' interval it was most distinctly recurring. As a stump does not contract under cocaine it cannot be a growth of erectile tissue. The septum itself does not appear to be infiltrated, and the opposite side is healthy.

An interesting subjective symptom is that for the last twelve months the patient has constantly had a musca volitante, about the size of a halfpenny, floating in front of the right eye. With the removal of the nasal growth this entirely disappeared; but on reporting himself yesterday the patient remarked that he felt sure that the tumour was growing again, as a small spot as large as a pin's head was once more moving in front of the right eye.

Is the growth a sarcoma, and, if so, how radical should the removal of it be?

Mr. DE SANTI thought it was a sarcoma.

Mr. SPENCER did not agree that it was distinctly sarcomatous. He would wait a month and see the results.

Mr. C. SYMONDS said that from the microscopical section he would not hesitate, but operate freely at once.

Dr. D. NEWMAN considered it undoubtedly sarcoma.

Mr. WAGGETT thought it was a sarcoma.

Mr. STEWART thought it was a sarcoma, and suggested that it should be sent to the Morbid Growths Committee.

Case of Interarytenoid Pachydermia Laryngis. Shown by Dr. H. TILLEY.

Patient is a woman, aged fifty-three, and was shown at a meeting last year. All her symptoms are better now than they were then, when they consisted of feelings of suffocation and darting pains to each ear from the throat.

Examination shows a growth in the interarytenoid space, with a vertical fissure dividing the growth into what at first were two equal halves. A small portion, however, of that on the right side has been removed.

Treatment has been by application of lactic acid, from weaker solutions up to the pharmacopœial strength of 80 per cent.; nitrate of silver grs. 30 and ʒj every third day for two or three weeks. The condition has much improved as far as her personal comfort is concerned.

In answer to Dr. Seanes Spicer, Dr. TILLEY stated that the anterior portion of one of the turbinate bones had been removed, but there was nothing wrong with the nose now.

Laryngeal Case for Diagnosis. Shown by Dr. H. TILLEY.

Patient is a man aged fifty-one. Thirteen years ago he had syphilis, since which time he has had throat trouble. He came to the London Throat Hospital last January complaining of difficulty of breathing and hoarseness.

On examination granulation masses on the vocal processes—which are still present in less degree—were noted; the vocal cords were movable; there was a swelling of the left arytenoid. The whole laryngeal surface secreted mucus freely, and was very red and congested.

He has been continually on iodide and mercury, and has improved to such an extent that he now has no difficulty in breathing; but the appearances as described are present in less degree, and he has been *in statu quo* for three months. The question is whether there is any other than a syphilitic disease present, *e.g.*, tubercular or even malignant disease.

The PRESIDENT remarked that it was very difficult to give an absolute diagnosis. He thought it was either a syphilitic or an ordinary inflammatory growth. He saw no harm in removing a portion for microscopical examination.

Case of Probable Intrinsic Carcinoma of the Larynx. Shown by Dr. DUNDAS GRANT.

J. W., aged forty-five, consulted Dr. Grant on December 9th, 1895.

for hoarseness of two years' duration and difficulty in breathing, with stridor on inspiration and to a lesser extent on expiration.

There was no spontaneous pain, but difficulty in swallowing liquids, which made him cough. He also had an aphonic cough, with the expectoration of a little mucus tinged with blood.

Had never had hæmoptysis nor night sweats, there was no family history of phthisis, and the condition of the chest was normal. No direct or indirect history of syphilis. No enlarged glands. No spreading of the thyroid cartilage.

On laryngoscopic examination there was found to be inward distortion of the left side of the epiglottis, swelling and immobility of the left aryepiglottic fold and arytenoid cartilage. The left ventricular band was red and infiltrated, and below it, covering the greater portion of the vocal cord, was a pale granular swelling, sessile, and projecting beyond the median line.

The right side of the larynx was slightly congested, but free from ulceration or fixation.

Tracheotomy was performed, and the wound healed without the slightest delay.

The exhibitor thought there would be no difference of opinion as to the nature of the case.

The PRESIDENT suggested an immediate and radical operation in this case. He should at once perform thyrotomy and thoroughly remove the contents of the larynx.

THE NEW YORK ACADEMY OF MEDICINE.

December 18, 1895.

Dr. D. BRYSON DELAVAN, *Chairman.*

SECTION ON LARYNGOLOGY AND RHINOLOGY.

Instruments.

Dr. B. F. DOUGLASS exhibited a probe-pointed tonsillar knife, devised by himself for the purpose of severing adhesions of the tonsils to the anterior pillars and for incising crypts of the tonsils. He also showed a nasal speculum with a clamp attachment, which made it self-retaining.

Dr. L. A. COFFIN exhibited Emmet's full-curved right-and-left scissors, which he stated he has found very useful for the purpose of separating the tonsils from the anterior pillars.

Dr. L. F. MIAL exhibited a nasal saw devised by himself, and made by the Ford Instrument Company. It differs from the instruments now on the market in having smaller teeth. The saw itself is slightly curved, and cuts both on the push and pull.

The Chairman (Dr. DELAVAN) had used this saw with great satis-

faction, and regarded it as the best of its kind. Its small size enables it to be introduced into the smallest sinus, and it cuts with admirable precision and speed.

A Case of Acromegaly with Laryngeal and Pharyngeal Symptoms.

Dr. W. F. CHAPPELL: I expected to show this patient to-night, but regret to state that I am unable to do so, as he died a few days ago during an attack of dyspnoea, to which he was subject. The patient came under my observation on November 27th, 1895, complaining of pain in the left side of the nose and slight difficulty in breathing. Dr. J. A. Booth saw the patient with me, and took some photographs, which he will afterwards exhibit. These show the general features of the case, which was clearly one of acromegaly. I will confine myself to the condition of the nose and throat.

An examination showed that the inferior turbinated bodies were enormously enlarged: the other structures in the nasal cavity appeared normal. The anterior and posterior pillars, the soft palate, and the uvula were much thickened: also the tonsils and their capsules. The lingual glands were much hypertrophied. An external examination showed that the larynx was very much enlarged. The epiglottis was thickened. The arytenoid cartilages and the ventricular bands were enlarged. The opening between the vocal cords was very small. While the patient remained quiet respiration was only slightly impaired, but excitement produced laboured breathing, and a crowing sound during both expiration and inspiration. During one of these attacks of dyspnoea the patient died.

Dr. J. A. BOOTH: The patient referred to by Dr. Chappell came under my observation on November 29th. He presented many of the typical symptoms of acromegaly, both subjective and objective. I was unable to secure an autopsy.

A Case of Fatal Pharyngeal Hemorrhage.

Dr. G. E. BREWER: The patient was a well-developed, vigorous young man, who recently developed symptoms of an ordinary sore throat. An inspection showed some redness and swelling in the region of the left tonsil. There was pain on swallowing. The symptoms increased in severity, and the presence of a peritonsillar phlegmon was suspected. The case was regarded as a mild quinsy. A day or two later spontaneous rupture occurred, followed by a small amount of hemorrhage. The inflammatory symptoms subsided, but the hemorrhage recurred from time to time. The man felt well enough to go to work, and while sitting in his office a severe hemorrhage occurred, which resulted in syncope. It ceased spontaneously. That evening, when I saw him for the first time, his pulse was 120; temperature, 100.5. An inspection of the throat showed that the region of the left tonsil was slightly more swollen and congested than that on the opposite side. A small clot of blood was observed adherent to the posterior pillar; this was supposed to be the origin of the hemorrhage. Absolute rest in bed was advised, and a five-volume peroxide of hydrogen solution ordered to be used in case of further hemorrhage. The following morning his pulse and temperature were normal. The nasal cavities were now examined, and were found to be

apparently normal. On the posterior surface of the soft palate was a small granulating surface, covered by a firm clot of blood. Every other source of hæmorrhage was excluded. Five hours after this examination, without apparent exciting cause, and while the patient was resting quietly in bed, a severe hæmorrhage occurred, which was checked by the peroxide of hydrogen. About thirty-six hours later he had another, which was also promptly checked. A pad was now devised, by means of which firm pressure was made over the bleeding point. For six hours after this the patient did well; he then had a fit of coughing, which was followed by a fatal hæmorrhage. I have been unable to find in literature the record of any case similar to this.

Dr. JONATHAN WRIGHT: Last winter a woman was presented to the section who had a pulsating tumour of the tonsil, which was supposed to be an aneurism.

Dr. CHARLES A. BUCKLIN: I saw the patient referred to by Dr. Brewer before he came under the latter's observation. While examining him, I saw bright blood oozing from the region of the sphenoidal opening: on wiping off this blood it rapidly reappeared. I am inclined to think that the hæmorrhages in this case came from the sphenoidal cavity.

Dr. BREWER: I saw no evidences of any sphenoidal disease. I would like to ask whether any of the members present have seen violent arterial hæmorrhages arise from chronic disease of the sphenoidal sinus.

Dr. J. W. GLEITSMANN: I have seen violent hæmorrhage follow an attempt to get an opening into the sphenoidal sinus. I believe I succeeded in getting into the sinus. A few hours after the operation the patient had a violent hæmorrhage, which I think must have come from that region. Of course, I am not positive that the blood came from the sinus proper.

Dr. ROBERT C. MYLES: I have seen a case in which a severe hæmorrhage followed an attempt to remove a part of the sphenoidal-sinus wall. This may have come from one of the palatine arteries or from the cavernous sinus. As regards the distance from the opening of the nose to the sphenoidal cells, I think it varies only a little in different heads. The sphenoidal cells are a few millimetres farther forward in some persons than in others. The average distance to the anterior upper wall I would put at two and seven-eighths to three inches, and to the posterior wall four inches, or perhaps a trifle over.

Dr. WRIGHT: I have recently made some measurements in eight cases to ascertain the distance from the external opening of the nose to the sphenoidal cavity. They all measured from two and one-half to three inches to the anterior wall, and three and one-half inches to the posterior wall. The measurements were made from the outside of the soft tissues covering the nasal spine.

Dr. GLEITSMANN: I cannot agree with Dr. Wright. I have shown a patient here, and I have seen others, on whom the probe could be passed into the sphenoidal sinus for a distance of from three and one-half to four inches. The same measurements have been obtained by Grünwald, of Munich, after an extensive series of experiments, and they have been corroborated by others.

A Case of Empyema and Polypoid Degeneration of the Frontal Sinuses Cured by Double External Operation and Packing.

Dr. ROBERT C. MYLES : J. M., male, aged twenty-seven years, first consulted me in September, 1893. He gave a history of extreme suffering that had existed more than twelve years. His principal symptoms were headaches, a nervous and unsettled mental condition, sleeplessness, nasal catarrh, a tickling sensation in the throat, and a great deal of sputa, most of which came up from the bronchi in the shape of greyish and greenish lumps. He had been under the care of a number of eminent physicians and surgeons, but their treatment had never been directed in an active manner to the nasal cavities. He was given morphine, until he had almost acquired the habit. The patient then resorted to the excessive use of alcoholic stimulants, in order to obtund the pain.

An examination demonstrated polypi in both middle meati, with muco-pus issuing from both anterior ethmoidal cells, from both frontal sinuses, from the antrums of Highmore, and the posterior ethmoidal cells.

I removed the polypi, passed the smallest sized curette into the frontal sinuses, irrigated the antrums as well as the frontal sinuses and anterior ethmoidal cells by means of silver tubes, and for a while the patient experienced great relief. Then the frontal headaches returned with great severity.

On November 16th, 1893, I performed an improved frontal-sinus operation, as follows :—The patient being under ether, an incision was made starting over the right nasal bone and continued upward across the articulation of the nasal and frontal bones to the middle of the space from which the eyebrows grow, on the supra-orbital ridges ; from this point, which was about twelve millimètres from the median line of the skull, the incision was carried outward to within two millimètres of the supra-orbital notch ; from here another incision, at right angles to the former, was carried upward on the forehead for a distance of about fifteen millimètres. After exposing the bone and checking the hemorrhage, which was done by compression, an opening was chiselled into the frontal sinus, commencing about twelve millimètres to the right of the median line of the frontal bone. The opening was about twelve millimètres in diameter. The frontal sinus was found to be filled with polypi, granulation tissue, and pus ; it was carefully curetted, and the infundibulum was enlarged. The incision over the brow was brought together with sutures : it united by first intention and without scarring. In making the opening, care was taken to remove only the under surface of the supra-orbital ridge, and that no injury be done to the superior oblique muscle. The cavity was packed with iodoform gauze for a month, after which it gradually healed. The patient has been free from discharge and pain in that sinus since that time. The small scar is not objectionable. I subsequently opened the antrum through the malar ridge and curetted it. The cell was kept open with rubber tubes for several months. No secretion can be detected coming from the hiatus now.

In the summer of 1894 I removed the middle turbinate on the left, cut into the anterior ethmoid cells through the floors, and curetted and irrigated them : also the left frontal sinus. Subsequently the left frontal

sinus commenced to discharge muco-pus rather actively, and the patient complained of headaches on that side. In June, 1895, the left frontal sinus was opened, in a manner similar to that described above; polypi were found growing on different portions of its walls and the cavity contained muco-pus. I enlarged the opening into the nose by drawing a piece of gauze through the infundibulum, and packed the cavity for a month. Subsequently I used a tube, and occasionally curetted granulations and small polypi, which seemed to develop in the crevices. The wound gradually healed, and he has since been free from frontal headaches. This operation caused only a slight marring of his facial expression. Not long since I removed the floor of the posterior ethmoid cells on the left side, and curetted some polypi which were found there. There are still some polypi to be seen within the cells through the aperture which I have made in their floors. I intend in the near future to remove the floors of the right posterior ethmoid cells.

A Case of Central Cleft of the Soft Palate.

Dr. MYLES : A. G., male, aged twenty-one years, first came under my observation in October, 1891. He was suffering from a central cleft of the soft palate which extended to the bone. His mumbling words could only occasionally be understood, and on account of his defective speech he had been unable to obtain a business position. He applied for treatment both in England and America, but this was refused on account of the slight hope of success. On October 13th, 1891, the man was put under ether: the edges of the fissure were then pared and an incision made on either side, following the margins of the hard palate, nearly to the pterygoid plates. This was done after the method which, I believe, was devised by Dr. McBurney. The object was to relieve the tension which the muscular filaments would exert on the stitches. I then passed several sutures about six or eight millimetres from the margin of the cleft, and brought them through the opposite side. Notwithstanding these precautions, I noticed a few days later that the operation was presenting the appearance of a failure. Under cocaine anaesthesia I then passed a curved needle through the tissues, as on the previous occasion, only the stitches were inserted much farther from the margins. These were intended as supplementary stitches, and produced the very satisfactory result which you see this evening. The young man's speech has been wonderfully improved under certain exercises advocated by instructors in vocal culture. Two interesting points in connection with the case are the remarkable development of the constrictor palato-pharyngis muscle—which I do not believe is mentioned in books on anatomy—and the extremely elongated tip of the inferior turbinate.

Seven Cases of Goitre in the Same Family.

Dr. L. F. MIAL : This family came under my notice about two years ago. I first saw the youngest sister, ten years old, who had bilateral enlargement of the thyroid, both lobes being equally enlarged. She informed me that three of her sisters, one brother, her mother, and grandmother, presented a similar condition. The children were all born in

Berlin, Germany, and came to this country about six years ago. In one of the sisters the goitre developed after her arrival here. The following treatment was employed, which seemed to work well in two of the cases (in one case the goitre disappeared entirely, and remained absent for six months):—A salve consisting of tincture of iodine, white-precipitate ointment, and vaseline was spread on a soft cloth and continuously applied around the neck. The strength of the ointment was varied according to the age and susceptibility of the patient. In addition to this, the syrup of ferric iodide was given internally.

The Chairman (Dr. DELAVAN): While driving, some years ago, I counted thirty-nine cases of goitre within a distance of a few miles, from Geneva to Chamounix.

Dr. WRIGHT: I have seen quite a number of persons with goitre hailing from the northern part of this State and Southern Canada, in the neighbourhood of Niagara.

A Case of Multiple Syphilitic Lesions.

Dr. JAMES E. NEWCOMB: This woman is forty years old. Her father died of phthisis; otherwise her family history is negative. She was married when she was sixteen years of age, and had a miscarriage at the second month during the first year of married life. She presented soon after the usual symptoms of syphilis, for which she was only subjected to irregular and desultory treatment. About eighteen months ago she lost some pieces of bone from the nose, which from that time on began to fall in. At the present time there is extensive destruction of the nasal tissues. The uvula and a part of the soft palate are also destroyed, the remainder being adherent to the posterior pharyngeal wall. The epiglottis is involved and bent on itself. She apparently has no stenosis of the larynx proper. Four or five years ago she had some dyspnoea, which occasionally recurs.

A Case for Diagnosis.

Dr. QUINLAN: This man is about forty years old: an Italian by birth. He has a growth involving the bridge of the nose, which is possibly an osteo-sarcoma. It is gradually increasing in size—markedly so during the past two weeks. He complains of more or less frontal headache, and at times impairment of vision. There is almost complete stenosis of the anterior nares.

A Case of Papillomata of the Larynx Cured by Applications of Absolute Alcohol.

Dr. DELAVAN: The patient, a lady of fifty-five years of age, was first seen last May. She had been suffering for two years with progressive aphonia, which had become complete. She stated that she was subject to frequent colds, and that now and then she expectorated small, pink-coloured, fleshy masses. The laryngoscope revealed a collection of large papillomatous masses situated in the anterior half of the larynx, and especially involving the left vocal band. The right was partly covered also. The use of instruments was not desirable in this case, because the growth, although at first sight apparently typical of papilloma, was

nevertheless quite extensive, and for several reasons there was some question regarding its true character. A spray of alcohol was applied by the patient herself six times daily, and in a very short time improvement was noticed. The voice began to be better. The growths shrank in size, and several pedunculated masses came away. This treatment was continued until about the 1st of October, when no trace of papilloma could be found. The voice and larynx were absolutely normal.

In several other cases of this kind in which the same treatment is being employed, all are improving, although not yet far enough advanced to report them as cured. We have been told that applications of alcohol to certain nasal conditions is beneficial, and there seems to be no reason to doubt its efficacy in the case reported. It is possible that this also gives us a method of differentiating between a small papilloma and a malignant growth of the larynx. Of course we could not postpone the diagnosis of the latter condition for any great length of time.

Abscess of the Nasal Septum.

DWIGHT L. HUBBARD: The patient came under observation about fifteen months ago, presenting two bulging projections, which, to the inexperienced eye, resembled hypertrophied inferior turbinated bodies. He had passed through the hands of several physicians, who had cauterized the masses without benefit. On examination, the swelling proved to be an abscess of the cartilaginous septum; this was incised, evacuating about two drams of pus. After washing out the pus cavity I inserted a perforated cork splint on the right side, (the incision having been made on the opposite side), and packed the nostril with iodoform gauze. A narrower cork splint was then put in on the left side. This was removed every day, while the one on the right side was left undisturbed for a week. Recovery was rapid.

Dr. GLEITSMANN: A very similar case to the one related by Dr. Hubbard recently came under my observation. The patient was a woman thirty-five years old, who fell and sustained some injury to her nose. She was taken to the German Hospital, where Dr. Willy Meyer operated on her, straightening the nasal bones, etc. It was afterwards noticed that the woman could not breathe through her nose, and upon examination I found an enormous abscess of the septum, extending vertically about an inch and a half and horizontally about one inch. The abscess was incised and curetted, and healed without any trouble within ten days.

Dr. WRIGHT: In one case of abscess of the nose coming under my observation, the entire mucous membrane of the septum seemed to be undermined by the abscess. They all heal promptly when incised, with no further treatment.

Dr. C. C. RICE: I think abscesses of the septum are more apt to follow the use of the galvano-cautery than the knife or other cutting instruments. I have seen several such cases.

BRITISH MEDICAL ASSOCIATION.*Meeting, 1895. ("Brit. Med. Journ.," Oct. 12th, 1895.)*

President—Sir W. MACCORMAC.

SECTION OF SURGERY.**A DISCUSSION ON THE SURGICAL TREATMENT OF CYSTS,
ADENOMATA, AND CARCINOMA OF THE THYROID
GLAND AND ACCESSORY THYROIDS.**

Mr. H. T. BUTLIN, after some preliminary remarks, stated that he had never seen a tumour of an accessory thyroid, all those which appeared at first sight to have such an origin proving to be truly connected with the thyroid gland. This statement did not extend to thyroid tumours at the base of the tongue. He had, moreover, never seen a case of malignant disease of the thyroid in which there appeared the smallest likelihood of successful radical operation; but, nevertheless, he could not doubt but that in rare instances such cases were amenable to operation.

Almost all, if not all, partial enlargements of the thyroid gland were produced by separate and separable tumours, whether cystic, adenomatous, or combinations of cyst and adenoma; innocent in character, enclosed in distinct capsules, and for the most part growing in the midst of sufficiently healthy thyroid gland tissue. These tumours were to be enucleated by a simple and easy operation, without any special precaution against hæmorrhage, or any fear of injury to important structures. No satisfactory explanation had been given of the nature of hæmorrhagic cysts, though the readiness with which they bled might be due to the vascular intra-cystic growth which they frequently contained.

The great objection to operation was the resultant scar, and the author in consequence frequently made use of the method of Morell Mackenzie, which he believed to be excellent in suitable cases. The object was to convert the cyst into an abscess, which should discharge through a small canula until healed from the bottom, the resultant scar being almost imperceptible. The failures and dangers attendant on the procedure were, he believed, to be ascribed to improper selection of cases: parenchymatous enlargements were quite unsuitable for the method, which was also contra-indicated in strumous and delicate subjects, and in instances of very large and very thick walled cysts, cysts with calcareous walls, compound cysts, and cystic tumours. The author would not willingly inject a cyst containing a large mass of solid growth.

Mr. CHARTERS J. SYMONDS had had forty-four successful cases of operation. Carcinoma was inoperable. Scarcely any hæmorrhage resulted from incision into such growths. He employed the median incision for cysts. The troublesome method of Kocher was unnecessary in ninety-nine out of a hundred cases. Extirpation was uncalled for, and

enucleation was free from hæmorrhage as a rule. Hæmorrhagic cysts were those containing vascular growths. On puncture, hæmorrhage was alarming, but was best treated by rapidly turning out the growth and plugging, a procedure which immediately stopped the bleeding. Pure cysts did well with injection, but those containing solid growths did badly, as the wall was usually thin in these cases, and suppuration was liable to extend through it. Chloroform or A. C. E. should be employed.

A. W. MAYO ROBSON, Dr. W. W. KEEN, and C. B. KEETLEY also joined in the discussion.

Mr. JAMES BERRY considered that operation should only be undertaken for some definite reason other than the mere presence of a tumour. In thirty-one of his thirty-six cases dyspnœa afforded such a reason.

Localized tumours, however superficial, were always covered by a layer of thyroid tissue, often much stretched and atrophied. Such a layer should always be incised before enucleation.

In the main it was correct to say that unilateral tumours should be enucleated. Large solid fibro-adenomatous tumours, involving the whole of one lateral lobe, and usually met with in middle-aged women, required extirpation; and the same method was necessary where one lobe was occupied by a number of solid or cystic tumours. Globular shape and smooth surface usually indicated enucleation.

The position of the tumour was important as a deciding factor in the question of operation, and a cyst the size of a tennis ball, and causing great dyspnœa by reason of its situation behind the sternum, was exhibited. The cyst had been enucleated by the speaker, with excellent results.

With regard to hæmorrhage, extirpation kept this under complete control, all vessels being seen and ligatured. In enucleation, hæmorrhage was sometimes met with, and was best met by rapid completion of the procedure, and temporarily drawing the bottom of the wound to the surface.

Mr. A. E. J. BARKER recounted two cases of malignant growth successfully removed. The first had been pronounced malignant six years before operation. The growth was enucleated, and the infected glands behind the clavicle removed. Recurrence took place in a gland, which was removed two years later. Four years had since elapsed without further recurrence. In the second case, in which the right side alone was affected, the scalenus anticus had to be removed. Five years had elapsed without evident recurrence, though dyspnœic attacks suggested mediastinal growths.

Mr. JORDAN LLOYD had experienced the occurrence of severe hæmorrhage in two cases of enucleation. He considered the malignancy of Mr. Barker's cases was very unlike that usually met with in thyroid tumours. Possibly there was a kind of malignancy peculiar to the thyroid, of which these cases were examples.

Mr. THELWALL THOMAS recounted two cases of tumour in the accessory thyroids. In one instance tumours of thyroid structure were found behind the sterno-mastoid and under the angle of the jaw. In the other a tumour, situated above the clavicle in the posterior triangle, and

cystic in character, had been present from childhood. Incisions should be made parallel to lines of cleavage in the skin.

Mr. R. C. CLUCHEN believed that difficulty in operation was usually caused by previous application of strong medicaments to the skin. Atrophy occurred in large unilateral growths after removal of the isthmus.

Mr. C. W. CATHCART drew attention to the gradation in malignancy, there being an intermediate stage between malignant and innocent tumours.

Mr. BUTLIN considered that the account given of Professor Kocher's procedure showed that in England the surgery of the thyroid was much ahead of that of Continental operators. He had met with but one adherent thyroid tumour.—*Abbreviated from "Brit. Med. Journ." Report.*

Ernest Waggett.

AUSTRIAN OTOLOGICAL SOCIETY.

Meeting, May 28th, 1895. ("Monatsschrift für Ohrenheilkunde.")

President—Prof. GRUBER.

Prof. URBANTSCHITSCH. *The Favourable Influence of Extraction of the Malleus on the Auditory Function of the Opposite Ear, secondarily affected.*

The patient, aged thirty-four, had suffered since his fourteenth year from left-sided otorrhœa, and to this was superadded ten years later gradually increasing dulness of hearing on the right side. All treatment was without effect, until the patient could not hear a loud whisper with the right ear further than two to three paces. On the 5th February, 1891, the healthy malleus was removed from the left ear with the view of curing the suppuration in the attic; the discharge soon diminished and is now almost absent. After the operation the left ear, as far as hearing was concerned, was the same as before; but, on the other hand, the right ear immediately underwent a striking degree of improvement—whisper heard at four paces: this increased within the next few days, until a clear whisper was heard at from ten to twelve paces. After the lapse of four years it remains equally good.

2. *Extraction of the Malleus producing no improvement in the sound Ear, but removing the Vertigo and arresting the progressive Deafness.*—In this case, at the site of the extracted malleus there remained in the membrane a callous cicatrix, giving the impression that manubrium was still there.

3. *Irregular Tumour of bony hardness in the Right Auditory Meatus.*—The growth quite filled the lumen of the passage, and appeared to be attached to the front of the mastoid process. It was to be removed by operation; the result will be communicated later.

4. *Benign Neoplasm of the Left Auricle.*—This was situated on the edge of the helix, where it passes over into the lobule. It could be diminished by pressure with the finger, was circumscribed and movable, and when compressed was found to be firm. Under the influence of alcoholic indulgence, mental excitement, or exposure to cold, it swelled considerably.

Prof. POLITZER asked in what way the improvement in hearing of the opposite ear was to be explained in the first case.

Prof. URBANTSCHITSCH attributed it to the synergic action of the *tensores tympani*, as shown by Pollak's experiments and Gellé's observations.

Prof. POLITZER did not consider this explanation sufficient. The synergic action of the *tensores* had not been demonstrated in men. If the influence were as potent as stated, then in unilateral affection of the middle ear the opposite ear would be much more frequently affected by sympathy than it is.

Prof. URBANTSCHITSCH drew attention to a case which he had demonstrated before the last Assembly of Naturalists, in which by rarefaction of air on the one side he had affected the hearing power of the other.

Dr. GOMPERTZ had seen a case similar to the second. After extraction of the malleus a band-like cicatrix formed simulating the manubrium.

Prof. URBANTSCHITSCH: Might not the condition be explained by periosteal irritation on the inner wall of the tympanum? In his case there was no question of adhesion of the membrane to the inner wall.

Dr. GOMPERTZ replied that in his case there was undoubtedly adhesion.

Prof. GRUBER attributed the formation of the cicatrix to the growth of tissue from the upper wall of the meatus.

Prof. URBANTSCHITSCH asked if a callous cicatrix had ever been observed on the tympanic membrane.

Prof. GRUBER had never seen it, and he had, further, never seen a *membrana propria* developed after extraction of the malleus.

Prof. POLITZER took the growth in Case 3 to be an osteoma originating on the mastoid process, and projecting into the external meatus. Such osteomata in his experience were rare. He had described a similar case in his text-book.

Prof. GRUBER had seen similar cases in his clinic, and had operated on them, but they were chondromata.

Dr. POLLAK remarked, regarding the development of such growths, that in one case an osteoma which filled the whole external meatus had developed within a year after the extraction of a fibrous meatal polypus. The case had unfortunately been lost sight of.

Prof. POLITZER. *A Rare Form of Exostosis of the External Meatus, with Specimens.*

Attention was drawn to the fact that in spite of the by no means infrequent clinical observations of exostoses in the external meatus, there were very few *post-mortem* dissections of previously observed cases. The preparation which he was showing was from an educated man,

sixty-nine years of age, whom he had had frequent opportunities of observing during the last thirty years. At the first observation he found the right external meatus occupied by a yellowish bony growth on the postero-superior margin, the antro-inferior free border coming in contact with the corresponding wall of the meatus. The patient could give no account of the development of the growth, and could not even say whether he had ever suffered from otorrhœa. The most prominent symptom was the dulness of hearing, occasioned partly by the exostosis itself, and partly by accumulation behind the growth. After removal of the masses by means of a very fine tube, introduced into the meatus at intervals, well-marked improvement in hearing and diminution of the subjective discomfort always took place. The patient would not consent to operation.

A few years previously the patient was again referred to Prof. Politzer by Dr. Teleki, as for several days he had had severe pain and a fœtid discharge. Again, by means of a fine drainage tube, as before, the putrid masses were removed and the distressing symptoms relieved. The patient died two years ago, and the following is the condition of parts on dissection :—An exostosis of irregular surface, one and a half centimètres in length and one centimètre in breadth, grew from the posterior upper margin of the orifice of the osseous meatus. It appears to be limited to a furrow bound by the squamous and the mastoid parts of the temporal bone. After removal of the soft parts and the antero-inferior wall of the meatus, the lumen of this passage was found to be occupied by a brownish-yellow epidermic mass, which extended into the tympanic cavity through a small orifice in the membrane. After removal of this mass the meatus was found to be considerably dilated, the tympanic margin over the membrane of Shrapnel being eaten away to the extent of a lentil, the floor of the cavity thus exposed being covered with a thin sunken cicatrix, which came immediately in contact with the bodies of the malleus and incus. The upper wall of the meatus is eroded from pressure, leaving a fine osseous edge bounding the above-mentioned orifice; this leads into a smooth walled cavity, larger than a cherry-stone, encroaching partly upon the mastoid process. The upper vault of this is irregularly broken through and leads immediately into the mastoid antrum, which was likewise filled with crumbling epidermis. The inner side of the exostosis is somewhat hollowed out, so that the anterior margin has a slightly rounded edge; the base of the exostosis extends inwards in the form of a blunt projection, which separates the meatus from the cavity above, and on the other side it extends into this cavity. The mastoid process was completely eburnated. The upper cavities of the tympanum and a portion of the antrum were filled with young connective tissue; the middle and lower cavities were free; the labyrinth and canalis acousticus were unchanged.

He considered that most probably this exostosis owed its origin to a previous otorrhœa, and that the defect in the bone of the meatus, and in part also of the mastoid process, was due to the retention of epidermic masses. The perforation in the membrane and the simultaneous perforation of the osseous cavity in the direction of the antrum favoured the

extrusion of epidermic masses from the middle ear into the external meatus. It is probable that if the exostosis had been removed by operative procedure at an earlier period the bone defect would not have arisen.

Prof. POLITZER. *Demonstration of a Patient in whom the Radical Operation for the laying open of the Cavities of the Middle Ear was carried out, with subsequent Transplantation of Thiersch's Skin Grafts.*

A woman aged forty-six. The origin of the ear disease was unknown. For about a year she had had a slight non-fœtid suppuration from the left ear. Four weeks before coming into the hospital she had severe pain in and above the left ear, and for fourteen days obvious swelling at the tip of the mastoid process. On the first examination the meatus was observed to be narrowed, filled with pus, the middle ear to contain soft granulations; the soft parts over the mastoid process in its upper and middle thirds, normal; but at the point an abscess of the size of a nut, which had burst spontaneously with an opening the size of a pin-hole. On the 18th April the radical operation with plastic surgery of the wall of the meatus was carried out. There were whitish yellow dry cholesteatomatous masses in the tympanic cavity and the attic. The fistulous opening in the abscess at the point of the mastoid process led directly to the inferior wall of the tympanic cavity. Six days later Thiersch's transplantation was carried out with flaps of skin taken from the left forearm. On the anterior and upper wall of the wound the grafts succeeded perfectly, but the new skin did not adhere to the posterior wall. Although the skinning over of the anterior and inferior walls of the meatus prevented adhesions of the walls of the passage, it was decided nevertheless to carry out fresh grafts on the posterior wall. He thought that the safest means of preventing the recurrence of cholesteatoma is to retain a permanent opening in the mastoid region.

Prof. URBANTSCHITSCH had in several cases carried out transplantation according to Siebenmann and Bezold. In one case he employed with good result some skin from the opposite auricle, and in another case skin from the thigh. In one case which he operated on for cholesteatoma he grafted at the same time, and, so far as twelve days observation showed, the grafts are doing well.

Prof. GRUBER (Vienna). *On Morbus Ménièrei.*

The speaker recommended giving up the term "Ménière's symptoms," but retaining that of "Ménière's disease" for the conditions to which Ménière applied it, namely, primary labyrinthine affections, hæmorrhagic or exudative, with vertigo, subjective noises, and deafness, apart from pyrexial inflammations of the labyrinth.

When the so-called Ménière's symptoms arise from disease of other parts of the organs of hearing, they should be mentioned among the accidental complications, and not as the main term in the formal diagnosis of the case. He directed attention to the varying anatomical formation of the saccus endolymphaticus, and of the aqueductus vestibuli, and suggested that when they are exceptionally small the outflow of

endolymph might be readily interfered with, and abnormal tension, such as to produce vertigo, readily induced.

In the discussion, in which Drs. HERR VON FRANKL, HECKWART, URBANTSCHITSCH, POLITZER, GOMPERTZ, POLLAK, and GRUBER took part, it was generally recognized that in the introduction read by Prof. Gruber there were some new and important points of view with regard to the nature and prognosis of these diseases brought forward; but that the description, "Ménière's symptoms," should be retained for the sake of practical necessity as a name for a certain complexus of symptoms, but not, like "morbus Ménièrei," arising from a primary disease of the labyrinth.

Dundas Grant.

ABSTRACTS.

DIPHTHERIA, &c.

Buckingham, E. M. — *A Clinical Study of Cases of Angina resembling Diphtheria in which the Bacilli are reported absent.* "Arch. of Pediatrics," Dec., 1895.

A CLINICAL report of fifteen cases of apparent diphtheria in which repeated bacteriological examination was made with negative result. The temperature remained high for longer periods than a parallel series of true diphtheria cases, the heart action was stronger, and the amount of redness and swelling was out of proportion to the membrane. The author suspects scarlet fever with absence of rash.

Ernest Waggett.

Discussion on Diphtheria in the Glasgow Medical and Chirurgical Society. "Glasgow Med. Journ.," July and August, 1895.

THE discussion was opened by (a) Dr. R. M. Buchanan, who dealt with the bacteriology of diphtheria; (b) Dr. Armand Ruffer, who dealt with (1) the question of the diagnostic value of the diphtheria bacillus; (2) the methods of preparing toxin; (3) the methods of inoculating horses so as to obtain a maximum of immunizing power in a minimum of serum; (4) what appeared to be the pathological bearing of the subject under discussion; and (c) by Dr. Newman, who discussed the pathology of diphtheria, the mode of action of antitoxin, and gave his experience in the use of the antitoxin treatment.

A. J. Hutchison.

Nes (Hanover). — *Intubation in Diphtheria.* "Deutsche Zeitsch. für Chir.," Band 42, Heft 1 and 2.

THE author concludes: Tracheotomy is preferable to intubation, but in many cases intubation may be substituted. In the two first years of life intubation should not be performed. If the lungs are not healthy, intubation should not be performed. In cases in which it is impossible to remove the canula, intubation supplies the best results.

Michael.

Sequeira, J. H. — *Chronic Pharyngeal Affections and their Relation to Diphtheria.* "Lancet," Jan. 18, 1896.

REFERS to the fact established by StClair Thomson and Hewlett that air filtered through the nares is practically germ-free, and deduces as a corollary that anything

that contributes to oral breathing must be a predisposing factor in the onset of diphtheria. He concludes that (1) tonsillar and post-nasal adenoids are found chiefly in children from the age of two to puberty, and 80 per cent. of the cases of diphtheria are found between these ages; (2) these pharyngeal affections are rare after thirty, while only 3 per cent. of diphtheria cases occur at this period of life; (3) 72.5 per cent. out of forty cases of diphtheria that he had examined presented evidence of tonsillar hypertrophy; and (4) diphtheria is a common sequela of scarlet fever, which severely affects the tonsils, and often leads to mouth-breathing.

St. Clair Thomson.

Wolf, M.—*Accessory Cavities of the Nose in Diphtheria, Measles, and Scarlet Fever.* "Zeitsch. für Hygiene und Infect. Krankheiten," Band 19.

In most of the examined cases the author found inflammation of the accessory sinuses. In cases of diphtheria sometimes Loeffler's bacillus is found. Michael.

NOSE AND NASO-PHARYNX.

Batten, Raynor (London).—*The Association of certain Forms of Myopia with Disease of the Nose and Pharynx.* Ophthalmological Society. "Lancet," July 13, 1895.

AT a meeting of this society (July 4th) Dr. Batten called attention to the association of a certain form of myopia, characterized by localized posterior staphylomata, tilting, and œdema of the prominent margin of the optic disc, with certain affections of the throat and nose—namely, adenoid vegetations, enlarged tonsils, deviation of the septum, syphilitic disease of the nasal bones, and chronic otorrhœa.

St. George Reid.

Berens, T. Passmore.—*Ichthyol in Rhinitis Atrophica Fœtida, and in Laryngitis Tuberculosa.* Manhattan Eye and Ear Hospital Reports, Jan., 1895.

ABOUT fifty per cent. of a series of seventy cases of uncomplicated ozœna have been "much improved" by application of the pure drug thrice weekly, together with the daily use by the patient of an ointment containing ten per cent. of ichthyol and five per cent. of eucalyptol. Owing to the excessive secretion induced all crusts are loosened and readily expelled. Improvement is reported in a few cases of laryngeal tuberculosis. Ichthyol excites secretion, is a deodorant, an absorbent, and a local anodyne.

Ernest Waggett.

Bronner, Adolph (Bradford).—*A Few Words on some Common Forms of Reflexes of Nasal Origin.* "Lancet," July 27, 1895.

AFTER referring to the various theories of numerous authorities on nasal reflexes, Dr. Bronner is of opinion they should be divided into two classes: first, where there is some local irritation of the terminal fibres of the fifth nerve, as polypus, local atrophy, etc.; and, secondly, where the nasal changes are not primary, but are due to some secondary neuroses. In these cases the galvanic-cautery generally gives relief.

St. George Reid.

Burger.—*On Empyema of the Antrum of Highmore.* "Volkmann's Vorträge," No. 17.

THE author gives a review on the symptoms, and adds a new symptom. If transillumination is used the patient has, if there is no empyema, a subjective

sensation of light ; if the cavity is full of pus, this sensation is not present on the diseased side.

Michael.

Carlsaw, John H.—*Notes on Two Cases of Parotitis as a Complication of Pneumonia and Influenza.* "Glasgow Med. Journ.," July, 1895.

In these cases the parotitis followed closely on an attack of acute pneumonia, the pneumonia seeming in each case to develop as a complication of influenza.

A. J. Hutchison.

Collier, Mayo (London).—*Two Cases of Severe Trigeminal Neuralgia due to Nasal Disease.* "Lancet," July 13, 1895.

THE neuralgia in these cases proved to be due to disease of the middle turbinate bone, and was immediately relieved on removal of the diseased portion.

St. George Reid.

Fink (Hamburg).—*On Hydrorrhœa Nasalis.* "Wiener Med. Presse."

THE secretory apparatus of the mucous membrane is innervated by the trigeminus. In one case observed by the author the patient discharged in one hour forty grammes of a clear watery fluid of 1003 specific gravity. If local pathologic states are observed they must be removed. If not, aristol gives the best results. *Michael.*

Hawthorne, C. O.—*Four Cases of Secondary Parotitis.* "Glasgow Med. Journ.," July, 1895.

NUMEROUS cases of parotitis, apart from mumps, occurring as an incident in association with other pathological conditions, are briefly quoted, and the explanations adopted by previous writers are given. The cases fall into three principal groups, viz. :—(1) Parotitis occurring in connection with disease or injury of the genital organs ; (2) parotitis in connection with some of the specific fevers ; (3) parotitis in connection with pelvic and abdominal lesions. Besides these larger groups, parotitis has been noted as a complication in pernicious anemia, in pneumonia, in peripheral neuritis, in influenza, in yellow fever, in acute rheumatism, and in chorea. The author's cases were : (1) "Without much doubt, a case of gastric ulcer, though the rapidity of the convalescence may possibly introduce a question as to the accuracy of the diagnosis." (2) "Latent gastric ulcer, or belonging to the group described by Trousseau and others, in which hæmatemesis occurs without any ulceration of the gastric mucous membrane." (3) A case of lobar pneumonia. (4) "The parotitis may fairly be regarded as following the appearance of purulent matter in the peritoneal cavity."

A. J. Hutchison.

Hopkins, T. E.—*The Recurrence of Lymphoid Hypertrophy of the Naso-Pharynx.* Manhattan Eye and Ear Hospital Report, Jan., 1895.

THE author puts on record twelve cases of recurrence of post-nasal adenoids, after careful operation by competent surgeons, employing general anæsthesia and various recognized methods of removal. He dissents from the views (references to which are given) expressed by most authorities as to the extreme rarity of recurrence, and urges the correction of obstruction in the nasal passages.

Ernest Waggett.

Knight, C. H.—*A Case of Fibroma of the Nasal Fossa.* Manhattan Eye and Ear Hospital Report, Jan., 1895.

DESCRIPTION of a dense, smooth, round, movable growth attached to the left middle turbinate and nearly filling the choana. Careful microscopic examination proved it to be a pure fibroma.

Ernest Waggett.

Lederman, M. D. — *Hypertrophied Pharyngeal Tonsil as the Excitant in Suppurative Otitis.* Manhattan Eye and Ear Hospital Reports, Jan., 1895.

REPORTS of cases of otorrhœa associated with post-nasal adenoids cured without any treatment other than the removal of the latter and subsequent nasal spraying.

Ernest Waggett.

Lichtwitz (Bordeaux).—*The Complications of Suppuration in the Accessory Cavities.* "Bresgens Sammlung," Heft 7.

ACCESSORY disease is followed by fœtor of the nose, accumulation of pus in the nose, and nasal polypus, exophthalmus, aural catarrh, headache, inflammation, erysipelas of the skin of the face, disturbance in the circulatory and respiratory organs, fever, somnolence, and melancholia.

Michael.

Noltermis (Bremen), — *On Serous Inflammations of Highmore's Antrum.* "Wiener Med. Presse," 1895, No. 21.

THE author observed in thirty-seven cases serous inflammations of Highmore's antrum. By puncture, a clear, yellowish fluid was discharged, which contained much albumen. In suspect cases probe-puncture should be performed, because the symptoms are not always characteristic. The author uses Krause's trocar. If there is fluid he then performs irrigation. In cases of serous inflammation one irrigation is sufficient.

Michael.

Ritter (Berlin).—*Angina-Dentalis.* "Deutsche Medicinalzeitung," 1895, No. 78.

THE author has observed that children with carious teeth have a great predisposition to acquire angina tonsillaris. In a large number of the author's cases this disposition disappeared when the carious teeth were extracted.

Michael.

Schnée (Moskau).—*Nasal Hammer.* "Zeitsch. für Kranknase.," 1895, No. 3.

THE author refers to Goltz's experiment, that by percussion of a part of the body, ifslight, a contraction of the vessels is produced; if strong, dilatation of the vessels arises. The author recommends an instrument for percussion of the nose. In acute coryza, slight percussion is indicated to produce contraction, and, in chronic, strong percussion to produce dilatation of the vessels.

Michael.

Thomson, StClair, and Hewlett, R. T.—*The Fate of Micro-Organisms in Inspired Air.* "Lancet," Jan. 11, 1896.

A FORMER communication by the same authors (*vide* JOURNAL OF LARYNGOLOGY, 1895, Vol. IX., page 796) showed that at least 1500 organisms are inspired every hour, while it must be a common event for this number to rise to 14,000. Expired air, however, is practically free from microbes (Tyndall, Gunning, Strauss). In the experiments of Strauss, of 609 microbes inhaled only a single one was expired. Lister's observations on pneumo-thorax caused by wound of the lung by a fractured rib seem to show that the organisms are arrested before they reach the air cells, while the experiments of Hildebrandt indicate that this arrest takes place before the trachea is reached—probably in the nasal passages. The authors confirm this, or they have examined the tracheal mucus from many recently killed animals, and have always found it sterile. If, then, the bacteria in inspired air are arrested in the nasal cavities, where does this take place, what becomes of them, and how are they got rid of? In their former paper the authors arrived at the conclusion that the mucous membrane of the normal nose seems to be usually quite free from micro-organisms, while the vestibules, vibrissæ, and crusts are swarming with them.

That the action of the ciliated epithelium is an important factor can hardly be doubted, for any particles on the dorsal wall of a frog's pharynx were seen to be moved along at the rate of 25 millimètres (one inch) per minute. The following observation also shows how rapidly bacteria are expelled from the Schneiderian membrana. Cultivations were prepared from the vibrissæ and mucous lining of the nose of one author who acted as the subject. No red growth developed in these, so that the bacillus prodigiosus was absent. A looped needleful of a pure culture of the bacillus prodigiosus was then deposited on a spot on the septum naris, and cultures were made from this spot and its neighbourhood at intervals up to two hours. Cultivations made within five minutes gave an abundant confluent growth of bacillus prodigiosus; after fifteen minutes the amount of growth was distinctly decreased; after sixty minutes the growth was diminished by 75 per cent.; after eighty minutes frequently no growth occurred; while after two hours no trace of the bacillus prodigiosus could ever be detected. No proof was obtained of bactericidal qualities in nasal mucus, but it was satisfactorily shown that it possessed the important property of exerting an inhibitory action on the growth of micro-organisms. Nasal mucus was collected on sterilized cotton-wool plugs; in removing these from the nose the mucus came in contact with the ordinary organisms which have been shown by the authors to be always abundant in the vestibules. In no case was the mucus sufficiently germicidal to prevent the free growth of these germs when sown on gelatine plates, not even when the germs had been left exposed to the action of the mucus (at room temperature) for several hours before making the cultures. Experiments made by mixing nasal mucus with cultures of bacillus prodigiosus, and then making gelatine plate cultivations at intervals, are detailed to prove that the mucus does not destroy the bacilli, but by itself is such an unsuitable medium that no development takes place.

Further proof of the fact that micro-organisms are caught in the nose is obtained from the experiments in which the authors tested the inspired air after its passage through the nose, and found that they were practically all gone.

Their conclusions are that all, or nearly all, the micro-organisms of the air are arrested before reaching the naso-pharynx; probably a majority are stopped by the vibrissæ at the very entrance of the nose, and those which do penetrate as far as the mucous membrane are rapidly eliminated. The nasal mucus is an unsuitable soil for the growth of organisms, and hence is an important factor in that it does not further their multiplication. The removal of the intruding organisms from the Schneiderian membrane is probably in the main due to the action of the ciliated epithelium, assisted by the trickling of mucus and the lachrymal secretion. Phagocytosis may share in the work of removal, though to a small extent, as only once phagocytic cells were found containing bacteria.

St Clair Thomson.

TURCK, F. B.—*Diseases of the Mouth, Ear, and Throat as Etiological Factors in Chronic Glandular Gastritis, with Bacteriological Studies of the Pharyngeal Vault.* "New York Med. Journ.," Nov. 23, 1895.

THE investigations cover a period of three years. Cultures were made from the nose and naso-pharynx, and evidence was sought to prove the bacteriological connection between chronic naso-pharyngitis and chronic glandular gastritis. The stomach cultures were obtained by a gyromele, and from the nose and naso-pharynx by a modified instrument, both of which are capable of efficient sterilization and are free from extraneous contamination. Many micro-organisms found presented identical morphological and physiological appearances in cases of chronic naso-pharyngitis and gastritis in the same subject. In the anterior nares numerous forms of cocci were found evidently merely arrested—in the nasal cavities very

few ; but in the naso-pharynx, when chronically inflamed, pure cultures were present of pneumococcus Friedländeri, streptococcus and staphylococcus pyogenes, as well as saprophytic bacteria, lactic acid spirillum, thread-shaped bacilli, and bacillus Coll. Four cases are given at length in which treatment of the naso-pharynx cured also the gastric catarrh. The mouth also has its share in these disorders
R. Lake.

Winkler (Bremen).—*On Operations in the Nose.* "Wiener Med. Woch.," 1895, Nos. 41 and 47.

THE partial or total removal of the lower turbinated bone is indicated (1) in all grave stenoses produced by broad pressure of the lower turbinate against the septum, if all milder treatments fail ; (2) in stenoses in which cautery is tried without effect, and if it is hoped that the symptoms will be improved by removing the nasal stenosis ; (3) in cases of papillomatous degeneration of the lower turbinate if it may cause grave symptoms. The operation is performed by scissors, knife, and forceps. Narcosis with cocaine.
Michael.

LARYNX, TRACHEA, &C.

A Curious Case of Suicide. "Weiner Med. Presse," 1895, No. 20.

A MARRIED woman is found in her house lying down. A piece of broken glass and a knife are lying near her. Also near her is found, in a mass of blood, her larynx. In the large wound hole the vertebral column is seen—no larynx—and the stump of the trachea could be felt. Both carotids were intact and pulsating in the wound. There was no doubt but that she wounded herself. She was brought into the hospital, and lived for some hours.
Michael.

Cassell, J. W.—*A Case of Multiple Papilloma of the Larynx.* Manhattan Eye and Ear Hospital Report, Jan., 1895.

OF interest on account of the extent of the growth removed (sufficient almost to fill a half-ounce phial).
Ernest Waggett.

Habermann (Graz).—*On Pachydermia Laryngis.* "Prager Zeitschrift für Ohrenheilk.," Band 16.

THE author has examined fourteen specimens of pachydermia laryngis with the following results : In all cases he found hypertrophy of the connective tissue of the mucosa and submucosa ; the vocal bands and ventricular bands show poly-poid and papillary excrescences ; the proliferation of the processus vocalis is more marked at the edges than in the middle, and so gives rise to an excavation. This excavation is produced by pressure of the opposite processus vocalis. In some cases ulcers and œdema are observed.
Michael.

Krebs.—*On Tracheitis and Laryngitis Sicca.* "Monats. für Ohrenheilk.," 1895, Nos. 6 and 7.

THE author does not believe in the existence of true pharyngitis and laryngitis sicca. In all cases which he saw it was combined with diseases of the Highmore antrum, with tuberculous or syphilitic diseases.
Michael.

Rethi (Wien).—*Remarks on Surgical Treatment of Laryngeal Tuberculosis.* "Wiener Klin. Woch.," 1895, No. 42.

ONLY in cases of a limited laryngeal tuberculosis, and with good general health, should operative treatment be performed. If there is extensive diseased or febrile affection of the lungs, it is better not to operate. *Michael.*

Scheier (Berlin).—*Laryngeal Neurosis.* "Wiener Med. Presse," 1895, Nos. 23 and 24.

THE author describes a case similar to the complex of symptoms described some years before by Michael as "dyspnoea spastica." Also in this case the nervous dyspnoea was incurable, but it was not so severe that tracheotomy had to be performed. *Michael.*

Schultzer (Berlin).—*On Tremor of the Internal Laryngeal Muscles.* "Charité Annalen," 1894.

TREMOR is sometimes observed in patients who are excited by the laryngoscope. Pathologic tremor is observed in hysteria, paralysis agitans, chorea, multiple sclerosis, and abscesses of the cerebellum; also true laryngeal and pharyngeal spasm are sometimes observed. In one case of spasm of the accessory nerve Gerhardt saw spasm of the vocal band of the same side. Reflex tremor is observed in cases of aneurism of the aorta and hypertrophic rhinitis; sometimes it is observed in cases of chronic mercurialism and chronic alcoholism. *Michael.*

THYROID, NECK, &c.

Allard (Brussels).—*Myxœdema Treatment.* "Wiener Allg. Med. Zeitung," 1895, No. 52.

THE author has cured a girl, fifteen years old, of myxœdema with an alcohol-glycerine extract of thyroid gland. *Michael.*

Buschan.—*On the Administration of Thyroid Gland.* "Deutsche Med. Woch.," 1895, No. 44.

TO learn the effects of the use of thyroid gland, the author took a great deal of this substance without acquiring symptoms of thyroidism. He believes that these symptoms did not arise because he drinks very little alcohol and eats very little meat. By experiments in animals it is stated that thyroidism very easily arises in carnivora—very rarely in herbivora. Therefore he recommends a milk diet during the use of thyroid gland. *Michael.*

Domenreiz (Naples).—*Physiology of the Thyroid Gland.* "Wiener Med. Woch.," 1895, No. 39.

THE author concludes: Total extirpation of the thyroid gland produces grave trophic and nervous disturbances, with a fatal end. In exceptional cases such consequences do not occur—probably by compensative function of an accessory thyroid gland. The complex symptoms must be viewed as auto-intoxication. The thyroid gland neutralizes toxins circulating in the blood. Between the functions of the spleen and the thyroid gland no relation exists. Successful transplantation of thyroid gland presents these consequences. *Michael.*

Schein.—*Tetany and Lactation.* "Wiener Med. Woch.," 1895, No. 12.

THE author observed that sometimes tetany and myxœdema arise during lactation ; he, therefore, believes that the product of the thyroid gland is secreted by milk, and that it will be of great advantage to use large doses of milk in cases of myxœdema and tetany. *Michael.*

Stokes, Sir William.—*Case of a Large Cystic Bronchocele necessitating Complete Removal of the Thyroid Gland.* "Lancet," Jan. 4, 1896.

A WOMAN aged thirty-three had had a large tumour in the neck as long as she could remember. Latterly it had greatly increased. On two occasions it had been tapped. Tumour extended from the chin to the sternum in the middle line, laterally to points well behind the posterior margins of the sterno-mastoids, downwards behind the sternum. The chin rested in a sulcus on the upper margin of the tumour. There had been some difficulty in swallowing. Removed under chloroform ; the trachea was left bare, and a large cavity behind the upper margin of the sternum, in which the transverse arch of the aorta could easily be seen. Recovery. As the removal of the thyroid gland was apparently a complete one, thyroid extract in small quantities daily was ordered. Nine months afterwards her condition was quite satisfactory. *StClair Thomson.*

E A R S.

Clemens, Brentano.—*Treatment of Suppuration of the Atticus Tympanicus.* Manhattan Eye and Ear Hospital Report, Jan., 1895.

IN cases of attic disease in which careful probing gives no evidence of the presence of necrosis, the author advocates antiseptic syringing with Hartmann's attic syringe, and relates four successful cases. In order to avoid vertigo, and to thoroughly wash out the attic, the point of the canula should be directed laterally and not towards the tegmen. *Ernest Waggett.*

Connal, James Galbraith.—*Necrosis of the Labyrinth, with Report of a Case* "Glasgow Med. Journ.," Sept., 1895.

IN this interesting paper the author reports fully a case under his own observation, in which one turn and a half of the cochlea, comprising the apex coil and a part of the central coil, was exfoliated. The patient was a man twenty-nine years old, a packing-box maker. Since an attack of measles, at the age of four, there had been discharge from the left ear. An acute inflammation in this ear occurred at the age of twenty-seven, when, from the symptoms, it is probable that the labyrinth was involved for the first time. Besides pain, etc., there were giddiness, sickness and vomiting, and temporary loss of consciousness. A fresh acute attack occurred about a fortnight before the patient came under observation, lasting till the sequestrum was removed. There was no facial paralysis. Testing the hearing power three months later, it appeared probable that the left ear did not hear. Quiet sounds—e.g., watch—were not heard, and loud sounds were probably heard by the right ear. When last seen the urgent symptoms had entirely disappeared, and the discharge, amounting to only a slight moisture in the canal, was perfectly sweet. In connection with this case the author has collected and tabulated seventeen cases which have occurred since the publication of Bezold's paper in 1886. *A. J. Hutchison.*

Dalby, Sir Wm.—*Hysterical (so-called) and Functional Deafness.* "Brit. Med. Journ.," March 16, 1895.

THE author narrates a case of so-called hysterical deafness in which he convinced himself by the demeanour of the patient (a young lady), and the accurate modulation of her voice, that hearing was really present. Cure followed spontaneously and suddenly. Such a condition cannot be termed hysterical, as volition does not enter into the question, for the patient cannot help hearing. Though cases of true functional deafness do occur under violent emotional influence, etc., yet this case (and perhaps that of Dr. Ransom, v.s.) is really a mental one, the patient straining perpetually to avoid evincing any perception of sound.

Ernest Waggett.

Deanesley, Edward.—*A Case of Aural Pyæmia without Sinus Thrombosis, treated by Ligation of Internal Jugular and Plugging of Lateral Sinus.* "Brit. Med. Journ.," April 13, 1895.

AN interesting case illustrating the occurrence of pyæmia without thrombosis of sinus, and also the advisability of not burying the jugular vein at the seat of ligation.

Ernest Waggett.

Green, J. O.—*Exploration of the Lateral Sinus.* "Boston Med. and Surg. Journ.," Nov. 21, 1895.

THREE cases are reported in which the sinus was explored. Vomiting was present in one case, and the other two had each a rigor. The sinus was healthy in all, and all recovered.

R. Lake.

Harris, T. J.—*Tinnitus Aurium.* Manhattan Eye and Ear Hospital Report, Jan., 1895.

AN analysis of 321 cases, with treatment and results. A case is reported of severe long-standing tinnitus due to administration of quinine in large doses, which, after giving no response to drugs or local treatment during four months, yielded to the application—by electrical cataphoresis—of cocaine to the dilated vessels of the middle and internal ear.

Ernest Waggett.

Jones, Lewis (London).—*The Electrical Treatment of Tinnitus Aurium.* "Arch. of Otol.," Vol. XXIV., Nos. 3 and 4.

THE current is applied to the auditory nerve by means of a bifurcated or divided electrode, the extremities of which are placed in front of the tragus and kept there by means of an elastic band or spring, the parts in contact with the skin being not less than two centimètres in diameter. The opposite pole is attached to a moistened pad placed on the back of the neck. It is necessary to employ a galvanometer and a rheostat, and the current should be so directed that the anodal pole is connected with the aural electrode. The current is slowly and steadily raised to five milliamperes, and still gradually to eight or ten, each ear receiving half the current. In favourable cases the noise is diminished during the passage of the anodal current, but care must be taken not to reduce the current too quickly at the end of the treatment. From the effect produced by the first sitting the results of continued treatment may be fairly judged of. In progressive sclerosis the prospects of cure by electricity are not very favourable.

Dundas Grant.

Nash, Gifford (Bedford).—*Two Cases of Septicæmia due to Middle Ear Disease. Operation; Recovery.* "Lancet," Aug. 3, 1895.

THE first case was that of a boy, aged twelve, who had suffered from otorrhœa for five years. A blow on the ear with the flat hand was followed by headache,

vomiting, photophobia, fever, and delirium. The mastoid was trephined, and cleared out with the gouge; no pus was found, and the exposed dura mater appeared healthy. Septic pleuro-pneumonia supervened, and the condition of the patient for some time was very critical. The lateral sinus was examined, but proved healthy. The patient slowly recovered. Three months after the attack there was no discharge from the ear, and the watch was heard at twelve inches (the previous condition of the hearing is not mentioned). The author does not claim that the operative proceedings had anything to do with the patient's recovery, but raises the question as to whether it would not have been better to ligature the internal jugular, notwithstanding the condition of the lateral sinus.

The second case is one of a boy, aged fifteen, with otorrhœa of two years' standing. Following an attack of earache, due to cold, there was headache, drowsiness, photophobia, increased deafness, foul discharge from the ear, and a rise of temperature to 103.6° ; the right side of the face was puffy, and there was tenderness over the mastoid and large vessels in the neck. The trephine was applied above and behind the meatus, and the middle fossa opened but found healthy; the mastoid antrum was then exposed and cleared out, two drams of foul pus being evacuated. The wall of the lateral sinus was discoloured and thickened. Twenty-four hours after the operation, the temperature having risen to 104° , with a rigor, the internal jugular was tied and divided at the level of the cricoid cartilage, the mastoid wound reopened, and a clot removed from the lateral sinus. In fourteen days, as the head symptoms had returned, accompanied by vomiting, the wound was again reopened, and two drams of pus evacuated from the lateral sinus; this was followed by swelling of the neck, which was incised, some foul pus being evacuated. The patient then made a fair recovery.

St. George Reid.

Nichols, J. E. H.—*An Analysis and Notes of 824 Ear Cases in the Year 1894.* Manhattan Eye and Ear Hospital Report, Jan., 1895.

THE paper deals with the methods of treatment employed and results obtained. A case of labyrinthine hæmorrhage is reported in which hearing was restored to normal during a course of potassium iodide. Daily dry swabbing, carried out by the patient, is employed in chronic otorrhœa.

Ernest Waggett.

Ransom, W. B.—*Hysterical or Functional Disease.* "Brit. Med. Journ.," May 4, 1895.

A LETTER in answer to Dalby's, pointing out that sensory disturbances may be associated with evident hysterical paralysis. Both are due to suspension of function of mechanism lower than the psychical centres, and sometimes are forerunners of actual organic change.

Ernest Waggett.

Ransom, W. B.—*A Case of Functional Deaf-mutism.* "Brit. Med. Journ.," March 2, 1895.

A DETAILED account of such a condition, associated with loss of palate reflex, occurring suddenly without obvious cause, in a man of nineteen not presenting hysterical stigmata. Immediate cure by Faradaic shock to larynx, after five weeks of inability to utter even inarticulate sounds, and apparent auditory insensibility to startling noises applied as tests.

Ernest Waggett.

Trafford, Mitchell.—*Fracture of Base of Skull—Recovery.* "Glasgow Med. Journ.," Oct., 1895.

THIS resulted from a fall. Insensible at first; regained consciousness in about ten minutes, when distressing vomiting at once set in and continued for more than

an hour. Blood flowed freely from the right ear; the discharge became more watery, then perfectly limpid, and lasted for a week. Deafness of right ear at first marked, now scarcely perceptible. Facial paralysis from the beginning; has not improved at all. Sensation in face not impaired.

A. J. Hutchison.

REVIEWS.

Gerber, P. H.—*Die Syphilis der Nase und des Halses.* ("Syphilis of the Nose and Throat.") Berlin: S. Karger. 1895.

DR. GERBER is peculiarly qualified to write the above monograph. His "Poliklinik" in Königsberg is not only for throat diseases, but also for venereal affections and diseases of the skin, and he has already made some valuable contributions to our knowledge of syphilitic affections of the upper air passages.

In the present work the author describes in detail the many manifestations of the syphilitic poison met with in the nose, pharynx, and larynx, and reports many illustrative cases of great interest. One must not look for much that is new in such a monograph, after all the work that has been done in this department by Lewin, Schuster, Seifert, and many others. Still it is of value to get the views of one with so large a clinical experience as the present author, especially on points regarding which there is still some difference of opinion.

Dr. Gerber, we observe, does not believe that a syphilitic catarrh of the nose or throat can be diagnosed as such without the help of other evidences of the disease; and even the well-known angina syphilitica, "though presenting a very characteristic appearance, cannot be said to be found only in specific disease." Of the other lesions the same is true—the plaque, the gumma, the ulcer, all require other evidence to establish their specific character, though the plaque he admits to be extremely characteristic in appearance. That the mucous patch may appear on the nasal mucous membrane and in the larynx he regards as beyond doubt, though its occurrence in the former situation is extremely rare.

In discussing syphilis of the accessory cavities the author breaks almost new ground. He records three cases of antral abscess due to syphilitic disease. In all of them there was dead bone in the middle turbinate, with polypoid growths.

Special attention is called to cases of tertiary ulceration confined to the naso-pharynx, and therefore liable to be overlooked. These have been christened by Dr. Hopmann "syphilis tertiaria occulta cavi pharyngo-nasalis," and are by no means rare.

Dr. Gerber still holds strongly the opinion that many of the cases of so-called simple ozæna developing at puberty are really due to an atrophic process following on the coryza neonatorum of congenital syphilis. In this we do not think he will find many to support him, the general view being rather on the side of Moldenhauer, who says "dass

“die ozæna simplex mit der constitutionellen syphilis durchaus nichts
“zu thun hat.”

It is sometimes stated that internal treatment is absolutely useless, and may even be dangerous, in the laryngeal stenosis following on tertiary syphilitic disease. This opinion Dr. Gerber does not share, but maintains, on the contrary, that even long after the formation of the stenosis astonishing improvement may follow antisymphilitic remedies.

For the discussion of many other important points regarding the clinical history and differential diagnosis of the disease in question, we commend this little book to all who are interested in the subject.

Middlemass Hunt.

Gould, G. M.—*The American Year-Book of Medicine and Surgery.* W. B. Saunders, 925, Walnut Street, Philadelphia, U.S.A.; Rebman Publishing Co., 11, Adam Street, Adelphi, London, W.C. Cloth, 38s.

THIS year-book is quite the largest in one volume in the language, and is just short of 1200 pages, beautifully illustrated. The book is, however, not unwieldy, as the paper is thin but good. The contents are abstracted from June, 1894, to June, 1895, and as far as we can see it is a most admirable work from beginning to end. It is a work of reference of the highest order, and not a literary review of all published matter. A pitch of excellence is arrived at by the great discrimination shown by the authors; and, for example, in the otological section, by Chas. H. Barnett, all anatomical and physiological points are omitted, as being of but small value to the general physician. No less than 100 pages are devoted to the otological, rhinological, and laryngological sections, which are all of more than usual interest and completeness; and the general physician will find all the new forms of treatment which are worthy of note placed before him. But it is not only the general physician, but also the specialist, who will find this a most valuable and comprehensive work; and we would draw our readers' attention to the chapter on influenza, disease of the digestive tract, disease of the thyroid gland, and pathology, and can cordially recommend it.

Jones.—*Medical Electricity: a Practical Handbook for Scientists and Practitioners.* By H. LEWIS JONES, M.A., M.D., F.R.C.P., Medical Officer in charge of the Electrical Department in St. Bartholomew's Hospital. Being the second edition of “Medical Electricity,” by William Stevenson, M.D., and H. Lewis Jones, M.D. With Illustrations. London: H. K. Lewis, 136, Gower Street, W.C. 1895.

THE appearance of the second edition of this standard work will be a source of gratification to practitioners in all branches of medicine who desire to apply electrical methods to their own particular branch. The book begins with historical and physical considerations, followed by a description of the various kinds of batteries and apparatus (including the now so generally employed dry batteries), and the methods of employing the public electric lighting currents. Portions of the work particularly applicable to our speciality will be found of very considerable value.

Dr. Lewis Jones is known to have made very critical investigations

into the value of electrical treatment in affections of the ear, and to have fixed the limitations of the applicability of the constant current in cases of tinnitus aurium and of nerve deafness. In addition to this he describes the technique of electrolytic dilatation of the Eustachian tube, and the results of all these are given very clearly in the work now under consideration. Free use has been made of the writings of foreign electrologists as well as of those at home, with the fullest acknowledgments in all cases. He describes the various methods of applying electricity in cases of exophthalmic goitre, and cautiously tells us that "so long as the pathology of the disease remains uncertain the electrical treatment must continue to be tentative. It has by no means succeeded" "in all cases, though numerous cures have been reported in the journals."

It is interesting to observe the somewhat apologetic tone adopted in the preface to this edition, the writer being evidently deeply—perhaps too deeply—impressed with the injury which has been inflicted upon its reputation by the actions of unscrupulous practitioners, both outside the profession and in it. We venture to express the belief that the publication of such works as that of Dr. Lewis Jones is calculated to render such apologies absolutely uncalled for in the near future, and we commend to our readers the very clear, scientific, and practical instructions conveyed in this most readable book.

Dundas Grant.

THE
JOURNAL OF LARYNGOLOGY,
RHINOLOGY, AND OTOTOLOGY.

Original Articles are accepted by the Editors of this Journal on the condition that they have not previously been published elsewhere.

Twenty-five reprints are allowed each author. If more are required it is requested that this be stated when the article is first forwarded to this Journal. Such extra reprints will be charged to the author.

The Editors are not responsible for opinions expressed in original Articles or Abstracts in this Journal.

Editorial Communications are to be addressed to "Editors of JOURNAL OF LARYNGOLOGY, care of Rebman Publishing Company, Limited, 11, Adam Street, Strand, London, W.C."

VOCAL DEFECTS AMONGST SCHOOL BOARD TEACHERS.

With Special Reference to the Occurrence of Teachers' Nodes.

(Abstract.)

[Read in the Section of Laryngology at the Annual Meeting of the British Medical Association held in London, July-August, 1895.]

By WILLIAM MILLIGAN, M.D.

HAVING had frequent opportunities during the last few years of studying the effects of prolonged use of the vocal organs amongst school board teachers, I desire to lay before you a few general observations bearing upon the etiology and mode of production of certain pathological conditions affecting the vocal cords at times to such an extent as to prevent the individual from following out his or her occupation. These observations have been mainly confined to the study of changes occurring in the laryngeal cavities of female school board teachers, partly because they have appeared to me to suffer in this respect more frequently than male school board teachers, and partly also because in certain schools female teachers are the more numerous body, and as a consequence come more frequently under observation. The pathological changes encountered appear to bear a direct relation to the length of time during which the individual has taught. For convenience of description the lesions found may be classified as follows :

(1) Subacute and chronic laryngeal catarrh affecting mainly the true vocal cords.

(2) Chronic catarrhal laryngitis, with subsequent paresis of certain laryngeal muscles.

(3) Chronic catarrhal laryngitis, with a varicose condition of the smaller vessels of the true cords.

(4) Chronic catarrhal laryngitis, with secondary pachydermic changes local or generalized.

These various stages may pass almost insensibly from the one to the other, so that when the stage of actual node formation is reached we must recollect that it is in reality the outcome of a gradually progressive series of pathological changes.

The catarrhal laryngitis from which so many teachers suffer appears to be from the commencement of a chronic catarrhal nature. Slow and insidious changes, due to a hyperæmic condition of the blood vessels of the true cords, are set up, ending in a gradual hyperplasia of the sub-mucous connective tissues, and followed by paresis of certain laryngeal muscles. These changes may progress somewhat rapidly, and at an early stage minute nodes may appear.

Usually, but not always, the changes are symmetrical. In one case in particular the left vocal cord was found distinctly granular, almost in its entire length, but no departure from the normal was observed upon the right side. The actual position of the nodes seems to vary but little, and in my experience they have been situated upon the edge of the cords at the junction of the anterior with the middle third. Usually they are about the same size, although cases have been seen where one node was distinctly larger than the node upon the opposite cord.

In investigating the causes of these various lesions, certain significant factors appear to me to throw light upon the particular condition which is found. In the first place, the hours during which the teacher is required to teach are, in many instances, somewhat long. Thus it is by no means uncommon for a teacher to have to teach for from five to six hours (Saturdays and Sundays excepted) in a large schoolroom where, perhaps, several other classes are being held at the same time. As a consequence of this the voice has to be raised considerably beyond its normal pitch, with the result that marked vocal fatigue is soon induced. An extra strain being thus put upon the laryngeal structures a hyperæmic condition is set up, resulting, as time goes on, in secondary changes in the mucous membrane taking place. In addition, in many instances girls assume the duties of pupil teacher at an early age—13 to 16—before the vocal organs are in a position to stand any undue strain, and just at the age when the first great tax is being put upon the female economy. I have been struck on several occasions by finding that the most aggravated forms of school board laryngitis have occurred amongst girls who began their career as pupil teachers at this early age, and cannot dissociate the *post hoc propter hoc*. Again, the fact that in the majority of schools the rooms are large and are occupied by several classes at the same time, with the result that the teacher, in order to be properly heard, must raise her voice and keep her voice at a raised pitch, must in the long run have most injurious effects.

The fact also that the school is frequently placed in a main thoroughfare, along which there is a constant stream of traffic with consequent noise, entails undue vocal exertion; and if the windows of the schoolroom have to be kept open, as so often is the case, to ensure fairly efficient ventilation, it will be easily seen what constant and excessive demands are

made upon the vocal apparatus of the individual teacher. The long hours, the close rooms, the constant mental strain, and the general want of outdoor exercise, must also be important factors in inducing that condition of anæmia so frequently met with amongst female teachers—a condition which, while lowering the general vitality, must react injuriously upon an already weakened vocal apparatus.

I would also like to point out the frequency with which nasal, but more especially post-nasal catarrh, is encountered amongst these teachers, and to suggest that its presence may have something more than a casual relation to the perverted laryngeal condition.

The general effect of these various etiological factors, working separately or in a combined manner, is, as has already been pointed out, to induce in the first place a hyperæmic condition of the laryngeal mucosa. As a result, slight hyperplasia of the connective tissues ensues, with thickening of the vocal cords and consequent imperfect coaptation during phonatory efforts. Should the same predisposing causes act during a prolonged period, a secondary inflammation of the musculature takes place, with resulting paresis of various laryngeal muscles.

In a few cases marked varicosity of the blood vessels running along one or both cords has been observed, and in one particular case a small angiomatous tumour appeared quite suddenly after a too prolonged use of the voice.

In the majority of cases which have come under my care, both in private and in hospital practice, definite nodes have been seen upon laryngeal examination. These nodes have varied from the size of a pin-point to that of a millet seed; have at times been situated upon one cord, although usually upon both; and have, without exception, occupied the free edge of the cord at the junction of its anterior and middle thirds. In appearance they have shown an almost pearly-white colour, and usually a small vessel has been traced running from the surface of the cord to the base of the node.

With regard to their actual nature, by some they are regarded purely as the products of an underlying inflammatory process, and are hence called "inflammation nodes." Others look upon their occurrence as the direct result of mechanical irritation due to the effects of prolonged muscular strain.

Fraenkel¹ regards them as being of glandular origin, but Coyne² and Kanthack³ deny the existence of glands towards the free edge of the vocal cords. Stoerk,⁴ on the other hand, finds that the nodules are most frequently formed of connective tissue, of elastic fibres, and proliferated epithelial cells; while Türck and Wagner⁵ regard them as related to the condition of chondritis or trachoma of the vocal cords, consisting of a localized thickening due to small confluent tumours caused by hypertrophy of the chorion and epithelium. My own observations lead me to

¹ "Berliner klin. Woch.," October 23th, 1889.

² "Recherches sur l'Anatomie Normale de la Muqueuse du Larynx."—"Th. de Paris," 1874.

³ "Virchow's Archiv," 1889, Bd. CXVIII., p. 136.

⁴ "Rev. Trans. de Laryngol., d'Otolog., et de Rhinolog.," 1882.

⁵ "Klinik der Krankheit des Kehlkopfes," Wien, 1886.

the belief that the node is the outcome of a localized inflammatory process, a chorditis; that on account of frequent mechanical irritation and muscular over-strain, congestions, hæmorrhages, and serous transudations occur, with the result that an hypertrophy of the epithelium and submucous connective tissues takes place. I am inclined also to think that the second node is, in some cases at any rate, due to the mechanical irritation produced by the first-formed node. No doubt, in the majority of cases, the same causes, acting equally upon both cords during the same time and in the same manner, affect both cords equally; but this is not always so. It is not uncommon to find patients suffering from hoarseness and partial loss of voice, who, upon examination, present the clinical picture of a single sessile node at the junction of the anterior with the middle third of the cord; while in other cases one occasionally sees a well-marked node upon one cord with a commencing node upon the other.

In the treatment of the above-described changes in the laryngeal mucosa it appears to me that almost more is to be expected by way of preventing such conditions from arising than is to be attained by any form of local treatment. In the first instance, I am fully convinced that girls are allowed to undertake the duties of pupil teacher a far too early an age. An intelligent girl, with an aptitude for work, can pass the sixth standard by the time that she is from 13 to 14 years of age, and is then eligible for the post of pupil teacher. Having acquired such a post, she has immediately to tax the resources of her vocal apparatus to such an extent that the organ is unable to stand the strain, and consequently breaks down either in whole or in part. Much good could, I think, be done by raising the age at which girls should be allowed to assume the duties of teacher to a time when the component parts of the larynx are in a more stable condition than can possibly be the case at the age of 13 to 14. Then, again, the vicious system of holding three or four classes in one room, at times with no separation between them but the breadth of a form, at other times separated merely by curtains, should be entirely abolished, and each class be allowed to meet in a separate well-lighted and well-ventilated room. I would also like to suggest, at this point, the great advisability of having the benches for the pupils placed in tiers, one above the other, so that the teacher, when speaking, would be obliged to speak up to her audience, and so would have to hold her head erect and the neck straight, in this way giving play to the thoracic muscles, an immense advantage to anyone who has to speak for any length of time. In the majority of schools I understand that the benches are arranged one behind the other upon the flat, but in a few recently built schools (I am alluding specially to Manchester schools) a partial system of benches in tiers has been introduced. In those towns where the schools occupy prominent sites in busy and noisy thoroughfares, I think much would be gained by paving the adjoining street or streets with wood or asphalt, in order to reduce the roar of the traffic as much as possible. I feel satisfied that if these precautions were adopted there would be less giving way of teachers' voices, with resulting better general health, and, as the natural outcome, more spirited and more efficient teaching of the young. In addition, a short course of instruction upon the best methods

of voice production and voice preservation, prior to the teacher undertaking her regular duties, would, I feel sure, be attended by much ultimate gain.

Physiological rest to the affected organ is, of course, of prime importance : but, unfortunately, this means time and prolonged holiday, which many a teacher cannot secure, partly on account of want of funds and partly for fear of losing her situation should the period of rest require to be somewhat prolonged. In early cases, where, perhaps, the only appreciable changes are congestion and inflammatory thickening of the mucosa, a short period of vocal rest, combined with the local application of weak mineral astringents and the cautious use of steam inhalations, will often produce beneficial results. I have also seen much good attend the nightly application of Leiter's cold coil, applied over the larynx for from half an hour to an hour at a time.

In cases where paretic conditions of the laryngeal muscles exist, and after any superficial inflammatory condition has been got rid of, the daily application of the continuous current will be found most effectual. In those cases, however, where definite nodes have formed, be they only the size of millet seeds, I must confess to great disappointment from the use of topical applications, or in fact from any form of local treatment. The local application of such astringents or caustics as nitrate of silver, chloride of zinc, or of chromic acid is praised by many ; others prefer the application of solid nitrate of silver ; while still others speak favourably of the galvano-cautery. Personally I have fought shy of the use of the cautery point, for fear of producing such an amount of cicatricial contraction that the last state of the patient might be worse than the first. In one case, however, in which, with certain misgivings, I did make use of it, the result was, on the whole, favourable. At the same time it appears to me to be a method of treatment requiring the greatest care and nicety. In those cases where the nodes are of such a size as to enable one to use a crush forceps or a fine snare, no better method of treatment can be adopted ; but these cases are the exception rather than the rule.

It has been my experience to see a very considerable number of patients suffering from the presence of nodes upon their vocal cords, and the difficulties encountered in trying to secure the return of a voice fit again to withstand the strain of teaching have been such that in several instances the patients have been obliged to give up their vocation as teacher, and take to some other walk in life. This, after years of special training as a teacher, is necessarily a very serious matter ; and if any preventive measures could be adopted to remove, if possible, those factors which appear to predispose to the formation of such pathological changes, great gain would necessarily accrue.

THE FUNCTION OF THE LARYNGEAL VENTRICLES AND VENTRICULAR BANDS.

(Abstract.)

[*Read in the Section of Laryngology at the Annual Meeting of the British Medical Association held in London, July-August, 1895.*]

By ALEX. HODGKINSON, M.B., B.Sc.

By far the commonest agent directly or indirectly interfering with the function of the vocal cords is dust, which, in the form of physical particles, is diffused everywhere to a greater or less extent throughout the air we breathe. Much the larger portion of inspired dust is drawn into the windpipe and larger bronchi, and, taken up by leucocytes, either passes into the bronchial lymphatics or is carried along by the action of the ciliated cells of the respiratory mucous membrane towards the larynx. In the *normal* condition of the air passages inhaled particles of dust, etc., are excreted in the interior of the leucocytes, and not floating free in the intercellular fluid. In abnormal conditions of the respiratory organs, on the other hand, the intercellular fluid is often seen loaded with free particles. In health the dust-laden leucocytes do not collect together in masses, to be excreted at intervals by coughing and other spasmodic efforts, but remain separate, passing through the larynx in a more or less continuous stream along its posterior wall, between the arytenoid bodies and over the interarytenoid fold into the alimentary canal. By this course interference with the function of the vocal cords is avoided. In catarrhal conditions of the air passages, on the other hand, the dust-laden mucous corpuscles collect together in larger or smaller masses, owing to the impaired function of the ciliated epithelial cells of the mucous membrane. And for the same reason small pellets of mucus stray from the normal or posterior track, and during phonation may often be seen passing between the edges of the vocal cords to their upper surface; and, if the cord is normal or only slightly catarrhal, moving over the surface of the vibrating cord to pass into the laryngeal ventricle. But if the cord also is in a catarrhal condition, the particles become stranded on its surface at a little distance from its free edge. A dark line of such particles may frequently be seen adhering to the upper surface of the cord in the case of residents in smoky towns suffering from catarrhal affections of the larynx. Coloured powder, such as indigo, blown on the normal cords, passes during phonation to the base of the cords, and sometimes remains near the entrance of the ventricles, and, directly phonation ceases and the cord is abducted, is washed over the free edge of the cords into the larynx below by a discharge of fluid from the ventricle.

The movement of particles from the edge of the cord to near the entrance of the ventricle is due to the vibration of the cord, but their further move-

ment into and within the ventricle is due to ciliary action. Dust or mucus adhering to the cords or within the laryngeal ventricles is discharged into the alimentary canal during the ordinary act of deglutition as follows : The glottis is tightly closed by approximation of the true cords, and the upper aperture of the larynx tightly compressed as previously described. By this compression the ventricular bands rub adherent matter from the cords, fluid is forced from the ventricles over the cords, and then through the upper aperture of the larynx at its posterior end between the arytenoid bodies into the alimentary canal.

From the above facts it is seen that (*a*), in man, whilst the laryngeal pouches supply their special secretion, the laryngeal ventricles themselves act as receptacles for dust and mucus cleared off the cords by their vibration, and which by its accumulation would otherwise interfere with phonation ; (*b*) that the ventricular bands have a threefold function—(1) they form the inner walls of the ventricles ; (2) they assist in closing all excepting the posterior extremity of the upper aperture of the larynx during deglutition ; (3) they aid in the removal of matter adhering to the vocal cords, both by friction and by their special arrangement, whereby the fluid from the laryngeal pouches is compelled to pass over the whole length of the cords from front to back in its passage from the larynx to the gullet.

PRACTICAL DEDUCTIONS FROM THE ABOVE OBSERVATIONS.

(*a*) Mucous corpuscles or leucocytes exercise a protective function on the organism by their property of enveloping germs and particles of dust and so facilitating their removal from the body.

(*b*) The passage of mucus from the air-passages along the posterior wall of the larynx to the gullet suggests a probable explanation of the frequency of secondary infection of this part in pulmonary tuberculosis.

(*c*) The observed passage of mucus, etc., from the ventricles downwards through the glottis into the air-passages proves that blood, pus, etc., coughed up from these passages may be of other than pulmonary origin.

(*d*) The clearing of the cords and ventricles by the ordinary act of deglutition helps to explain the clearing of the voice by eating, drinking, sucking lozenges, etc.

SOCIETIES' MEETINGS.

PROCEEDINGS OF THE LARYNGOLOGICAL SOCIETY OF LONDON.

Ordinary Meeting, February 12th, 1896.

FELIX SEMON, M.D., F.R.C.P., *President, in the Chair.*

DISCUSSION ON THE NATURE OF THE LARYNGEAL COMPLICATIONS OF TYPHOID FEVER.

Dr. KANTHACK then read the following paper, written by himself and Dr. J. A. DRYSDALE:—Opinions differ considerably with regard to the frequency of intra-laryngeal ulcerations during typhoid fever. After a short review of the literature relative to this point, the authors gave an account based on an examination of the *post-mortem* records of St. Bartholomew's Hospital during the years 1890 to 1894, and up to October, 1895. Of sixty-one cases, fourteen showed loss of substance in the larynx; in eight it was stated in the *post-mortem* books that the larynx had not been examined; so that assuming that the larynx had been examined in all the remaining fifty-three cases, which is doubtful, ulceration was found in twenty-six per cent. of the fatal cases. These defects are situated generally over the tip and edges of the epiglottis and in the neighbourhood of the processus vocalis. In these fourteen cases the epiglottis alone was affected four times, the larynx proper seven times, both larynx and epiglottis once; in two cases the soft palate or pharynx was ulcerated as well as the epiglottis.

The following associated conditions were noted: in eight cases congestion or oedema of the lung, pleurisy in four cases, otitis media and pyæmia in one case, gangrene of the lung in one case. The intestinal ulceration was extensive in eight cases, limited in two, and healing or healed in four. It is therefore not true that the laryngeal lesions invariably appear during the acute period of the fever before the healing commences.

The next question discussed was the pathological nature of the lesions—are they specifically typhogenetic? Dittrich's assumption that the ulcers are decubital was set aside as insufficient and erroneous. Rheiner's view is more commendable, viz., that the ulcers are produced by small repeated injuries acting on debilitated tissue. Rokitansky upheld the typhogenetic nature on anatomical reasons, the ulceration affecting the adenoid tissues of the larynx. This, they said, is incorrect, since along the tip and edges of the epiglottis and over the processus vocalis no such tissue ever develops. Others, from analogy of other post or intra-typhoidal

lesions, such as periostitis and parotitis, have assumed that the typhoid bacillus produces these ulcers. The evidence on this point is weak and insufficient, more especially because until recently the bacillus coli and the typhoid bacillus have been constantly confounded, and therefore none but recent observations by competent bacteriologists can be accepted. E. Fränkel and Brieger never obtained the typhoid bacillus in these laryngeal ulcers, and they themselves failed to do so in a recent case. As to other post-typhoidal suppurative lesions, typhoid bacilli have occasionally been found, and Janowski has shown experimentally that the typhoid bacillus is capable of producing suppuration either unaided or with the assistance of the pyococci. He gives, however, no observations regarding laryngeal ulcerations, and hence the bacteriological evidence is very incomplete, and such as there is points against their specifically typhogenetic nature.

Further, the clinical evidence does not support the typhogenetic specificity; there seems to be no relationship between the symptoms of the fever and the laryngeal lesions. The condition of the mucous membrane of the mouth and pharynx is of importance; in nine out of twelve fully reported cases it was described as dry and brown over the tongue, and in four fissured as well, and in one even bleeding. In many, if not in most, cases the patient was in the so-called "typhoid state." This condition must act as a predisposing element, especially since it may be assumed that in many cases the laryngeal mucosa was in a similar condition. It is then readily injured, and forms a portal for the pyogenic cocci always present in the mouth and larynx. Naturally, this would occur most commonly over and in the most insufficiently vascularized portions, *i.e.*, the tip and edges of the epiglottis and the processus vocalis. This explanation, however, does not satisfy all cases, and difficulties still remain.

Undoubtedly, the lesions are caused by micro-organisms; there is the strongest evidence that these are the pyococci, and not, except rarely, the typhoid bacilli. In some cases, no doubt, the latter may be the cause of the trouble, but it is only the soundest possible observations on this point which can be convincing. The best accounts (Brieger and Fränkel) certainly disprove the view that the ulcers are truly typhogenetic. Secondary or fresh infections by pyococci are common enough in other bacterial fevers, and there is no reason why this should not occur in typhoid fever, especially since it is well known that in this disease the streptococcus may produce endocarditis, and that in most suppurative lesions occurring during or after the fever pyococci are found. To speak of these ulcers as primarily typhoidal without the soundest and most objective evidence is mere theorizing; the evidence in their possession convinces them that these laryngeal ulcers occurring during the course of typhoid fever are caused by fresh infections with pyogenic organisms, which always abound in the larynx, and which gain a firm foothold on the debilitated tissues, although they cannot deny that in an individual case the typhoid bacillus may have escaped and caused the lesion.

Dr. WATSON WILLIAMS (Bristol) was of opinion that while the acute and chronic laryngeal lesions arising in the course of or immediately after an attack of typhoid fever are sometimes undoubtedly secondary, and the

result of septic infection, they are in the main specific and due to the typhoid toxin, and that they are more frequently associated with the presence of the Eberth-Gaffky bacillus than Dr. Kanthack's observations had led him to believe. He submitted the following reasons for arriving at this conclusion:—

1. As regards lymphoid tissue. Cornil and Ranvier had found that while in typhoid cases dying from pulmonary and bronchial complications catarrhal laryngitis was generally present, in a smaller proportion and in a more acute form of laryngitis, a form characteristic of typhoid fever, the "lymph follicles" were tumefied and formed nodules, in which the multiplication of the nuclei and infiltration of the retiform tissue were entirely similar to what is observed in the closed follicles of the small intestine. These tumefactions often give place to crateriform ulcers.

2. The remarkable frequency of initial lung symptoms in typhoid fever was suggestive of a specific origin, and, in fact, the typhoid bacillus had been found in the lungs in numerous instances (Councilman and others), especially when lung complications were marked. Similarly, in renal typhoid complications, Neumann, who has demonstrated the typhoid bacillus in eleven out of forty-eight cases, concluded that the bacilli appear in the urine only when the kidney is directly involved. The renal lesions, like the pulmonary, formerly thought to be due to pyrexia, should be regarded as being generally due to the action of the typhoid bacilli or their toxins.

3. The remarkable frequency as well as the more or less characteristic aspect of laryngeal ulcers of typhoid fever, as distinguished from their rarity in the other exanthemata, pneumonia, and acute bronchitis, and furthermore the fact that they were especially prone to occur when the lung complications, probably specific, predominated, was strong *prima facie* evidence in favour of their specific nature.

It might appear strange that, if the laryngeal and lung lesions were alike due to specific infection, the latter alone should so frequently result in ulceration. But in congenital typhoid the intestines do not present ulceration, and this Dr. Watson Williams attributed to the absence of saprophytic micro-organisms, especially bacillus coli, which, abounding in the intestinal tracts in after life, increase the virulence of the typhoid bacilli, the symbiosis resulting in the characteristic disintegration and ulceration. So in the larynx the ulcerative process may be attributed to the fact that, unlike the lung, it is much exposed to the combined action of saprophytic and typhoid bacilli under *conditions which markedly favour the development of extreme pathogenic properties.*

4. It was hardly possible to account for the inoculation of certain cases except by aerial infection. He referred to cases occurring in the Bristol Royal Infirmary, which he had already reported in detail,¹ in which a patient and nurse apparently caught typhoid fever from the expectoration of a case with laryngeal ulceration. All three cases were virulent and fatal, and two, at any rate, had typical typhoid ulceration of the larynx. Moreover, *from these typhoid ulcers, in the second case, the*

¹ "Brit. Med. Journ.," Dec. 15th, 1894.

Eberth-Gaffky, differentiated from bacillus coli bacilli, had been obtained by culture. Lucatello had also obtained typhoid bacilli from the laryngeal lesions in a case dying on the twenty-first day. With all bacteriological precautions, he found these bacilli both in the expectoration and in the tumefied but non-ulcerated mucous membrane.

5. Just as more general typhoid lesions fell into two groups, the acute and the chronic, secondary focal abscesses, otorrhœa, and osteomyelitis, in which typhoid bacilli had been demonstrated, so likewise did the laryngeal complications of typhoid fever.

Mr. S. G. SHATTOCK exhibited some preparations showing the ulcers so typical in situation, viz., over the vocal process of the arytenoid. He could say from having examined especially into the point that there was no lymphoid tissue in this situation in the normal condition, and therefore the lesions in the larynx were not strictly comparable to the intestinal lesions.

Dr. JOBSON HORNE, observing that when ulceration of the larynx is noted in typhoid fever it is not necessarily typhoid in nature, said this point had been brought to his notice whilst investigating microscopically a number of larynges presenting all sorts and conditions of ulceration. The ulceration in some of the larynges obtained at autopsies of persons dead from typhoid fever had been found under the microscope to be of a tubercular nature. This he considered of interest, having regard to the fact referred to by Dr. Kanthack and Dr. Drysdale, in their statistics, that not infrequently deep ulceration of the larynx in typhoid is associated with advanced pulmonary changes. In such cases it would be important to know the condition of the lungs and larynx before the onset of the fever. In one case the history suggested that the ulceration was a pre-existing condition. Bearing in mind that tuberculosis more commonly follows typhoid than any other fever, it may be that typhoid renders the laryngeal tissues more vulnerable to the attacks of the tubercle bacillus. He considered that typhoid may be a possible factor in the etiology of tubercular ulceration, and the tubercular diathesis a factor in the etiology of typhoid ulceration, of the larynx. This point might be considered in future statistics.

The PRESIDENT asked Dr. Kanthack why the cricoid cartilage was so frequently the seat of disease. There were several specimens showing this apart from ulceration at the vocal processes.

Dr. KANTHACK, replying to Dr. Watson Williams, did not accept the statement with which he credits Cornil and Ranvier with regard to the lymph follicles in the larynx. His own observations, and those of others, have shown the absence, even in disease, of any adenoid tissue over the processus vocalis and the tip of the epiglottis. This anatomical point was beyond discussion. Further, he desired to know what authority Dr. Williams had for stating that the typhoid bacillus had been found in the lungs in "numerous instances." He could not obtain any evidence on this point—in fact, it was generally acknowledged that the presence of Eberth's bacillus in the blood during typhoid fever was extremely rare and unusual. The comparatively frequent occurrence of this bacillus in the urine was indisputable, but from that no one could argue that the tissues

generally were infected ; organisms may readily find their way through the kidneys into the urine and bladder without there being a blood infection. The bacterium coli, for instance, escapes fairly easily into the kidney, and yet the tissues are free from it. To argue from congenital typhoid fever, in his opinion was to argue from the unknown. Dr. Williams assumed that the typhoid bacillus in the lungs produces no ulcerative lesions, because it does not exist there in symbiosis with the bacillus coli. Dr. Kanthack, on the other hand, had shown that it is always present there, so that, following Dr. Williams' own argument, necrotic lesions in the lungs should be common, "since the typhoid bacillus exists there in numerous instances." He suspected that there must have been a confusion between the bacillus coli and typhoid bacillus, if not perhaps in all cases, certainly in almost all cases. The case quoted by Dr. Williams was striking, and although he could not reject the observation he was by no means prepared to accept it, because he knew the errors generally committed in the diagnosis between the bacillus coli and Eberth's bacillus. In any case, it had no more value than a single observation could have. Most authors, including Wasserman and himself, had failed to find typhoid bacilli in the suppurative or inflammatory complications of enteric fever. He would not say that the typhoid bacillus never caused such processes, chiefly because Janowski had found it, and because he himself and also Dr. Klein had discovered it in the blood in ulcerative endocarditis. Savarelli no doubt was a brilliant writer, but as to the soundness of his discoveries he was less certain, and he would therefore recommend the use of more than a grain of salt with the conclusions of this versatile writer. Facts and not theories were wanted, and what Dr. Williams maintains had not been established as yet, viz., that the typhoid bacillus has been found over and over again in the typhoidal laryngeal ulcers. With regard to the President's question, he was not prepared to answer it without a little more thought and study, but he had always considered the cricoid perichondritis to be secondary to the ulceration over the processus vocalis.

DISCUSSION ON FOREIGN BODIES IN THE UPPER AIR AND FOOD PASSAGES.

Mr. CHARTERS SYMONDS, in opening the discussion, said he proposed to limit his remarks to the question of diagnosis and treatment. In the *nose*, where no history was given, he thought the most characteristic symptom was a unilateral purulent discharge, with more or less obstruction, the discharge being often blood-stained. In young children he suggested that in all such cases a careful examination under chloroform should be made. He asked for information as to other causes of a unilateral purulent discharge in children under six or seven. In his experience he had seen but two cases where no foreign body was found. He had found a probe and forceps the best instruments for removal. The plan of forcing a stream of water up the healthy side he had known to succeed, and asked as to the value of this method. He had no experience of sternatatoners, and doubted their value. In the pharynx, stress was laid upon the importance of examination with the mirror, and

the close resemblance of a string of glairy mucus to a fish-bone. The site of puncture was to be recognized as an elevation having a grey centre and showing a ragged aperture. Where nothing could be seen the finger should be used, and, if the body were felt, a forceps could be guided down. In young children this was the only method available. The danger of further driving in sharp bodies was referred to. Attention was next directed to the persistence of irritation after the removal of the foreign body, and of the nervous apprehension that frequently ensued. In the larynx the foreign bodies were divided into those which are small, and after the first paroxysm do not impede the respiration, but give rise to local pain, cough, and some dysphagia but no danger; and those which are large, or, being small, are so placed as to impede respiration. In the first class, removal by intra-laryngeal methods could be safely undertaken, and a case was given of a small bone successfully dislodged. In the second group he laid stress on the importance of having everything ready for tracheotomy in the event of a spasm being set up.

Where death or expulsion had not occurred, tracheotomy should be performed, and then the body removed through the wound if possible. If impacted in the glottis, he thought it better, after recovery from the operation, to attempt removal through the mouth before dividing the thyroid cartilage. The necessity of submitting such cases to a skilled operator before resorting to thyrotomy was insisted upon. In children, after tracheotomy a foreign body might be felt by the finger and removed from the larynx. A case was mentioned of this kind. With regard to the wound, he thought that if all extraneous substances were removed there was no necessity to retain the tube. He preferred to put in one suture above and cover with gauze rather than to suture the trachea and skin. In young children the danger of a tube itself was pointed out as a reason for not delaying extraction after tracheotomy; for if the body could not be reached and removed by the forceps, guided by the finger, division of the larynx must be carried out. The confusion liable to arise from the resemblance of the symptoms to those of acute laryngitis was pointed out, and cases given in illustration.

In the trachea and bronchi the value of the paroxysmal cough was referred to, also the importance of a knowledge of the nature of the foreign body. The danger of mistaking the quiet period for complete recovery was pointed out. A case of impaction of a pebble in the left bronchus was described, where removal was effected in the sixth week. Though much emaciated from hectic fever, the child rapidly recovered. The danger of inversion and succussion without previous tracheotomy was thought to be sufficient to exclude the method. That tracheotomy should always be performed when a foreign body is in the trachea or bronchus, was held to be a rule of surgery.

Cases of death from the entrance of food during the administration of anæsthetics were given, and others in which tracheotomy was successful.

In the œsophagus the main points dwelt upon were: the danger of over-manipulation causing fatal laceration; of driving a penetrating body into the aorta; the wisdom of forcibly pushing down impacted food rather

than waiting a few hours for solution to take place. With regard to *coins*, importance was attached to sounding with a bullet probang or the money-catcher, and the inadvisability of using an ordinary bougie. In this connection the speaker asked if the gullet should necessarily be explored in all cases. If so, and the child proved refractory, ought we to give an anæsthetic? He asked for experience as to the value of emetics.

The removal of tooth-plates by œsophagotomy was next discussed, and a case under the speaker's care was described. The operation gave rise to no difficulty in performance, and the tooth-plate was easily removed. In making suggestions for the management of the wound, preference was given to packing with gauze, after suture of the gullet.

Finally the speaker asked for information regarding the utility of illumination of the œsophagus.

The discussion was adjourned to the next meeting of the Society.

PATHOLOGICAL SOCIETY OF LONDON.

January 7th, 1896.

President—MR. BUTLIN.

MR. A. E. BARKER related the sequel to a case in which he had removed an enlargement of what was probably an accessory thyroid, containing cysts, some of which were papilliferous. Numerous recurrences had taken place in the form of definitely circumscribed tumours of thyroid structure. Although no lymphatic tissue was found in them, Mr. Barker was in doubt as to whether they were secondary, and therefore malignant growths in lymphatic glands, or were merely due to compensatory hypertrophy in other accessory thyroids.

DR. CYRIL OGLE exhibited a small goitre arising in an accessory thyroid behind the sternum.

MR. SHATTOCK regarded the recurrent growths in Mr. Barker's case as too numerous for the explanation of compensatory hypertrophy in accessory glands, and suggested that during the first operation the wound had become infected, and from the seeds so planted these other formations had ensued, the disease being infective locally but not generally. He compared the condition to the secondary formations which ensue on the peritoneum after rupture of papilliferous cysts of the ovary.

DR. NEWTON PITT drew attention to recorded cases of dissemination of thyroid tumours in the eye, skin, etc., following upon the growth of a primary tumour in the thyroid gland.

MR. JACKSON CLARKE spoke of a growth of thyroïdal structure situated under the sterno-mastoid, which he thought had a similar source to that under discussion.

The President (MR. BUTLIN) referred to a case recorded in the "Transactions," where metastatic growths occurred in the bones. The

adhesion of the primary tumour, in Mr. Barker's case, to the sterno-mastoid, was an indication of malignancy. In a certain number of cases secondary tumours had been excised and supposed to be primary, the enlargement of the thyroid being overlooked. In some cases no further recurrence had been observed.

Mr. BARKER considered that the adhesion to the sterno-mastoid was due to previous electrolysis. During the removal one or more cysts were burst.

Ernest Waggett.

January 21st, 1896.

The Escape of the Diphtheria Bacillus into the Blood and Organs.

Dr. A. A. KANTHACK and Mr. T. W. W. STEPHENS, after mentioning the work of Wright, Stokes, Frosch, and others on this question, recorded their observations on eighteen fatal cases, in thirteen of which there was marked broncho-pneumonia and in fourteen laryngeal diphtheria. In all the eighteen cases diphtheria bacilli were present in the lungs. In Wright's fourteen cases thirteen presented bacilli in the lungs. They concluded that the broncho-pneumonia was frequently, if not generally, diphtheritic in nature.

In twelve instances the spleen was examined, and in nine of them the bacilli were found. Wright and Stokes detected them in six out of forty spleens examined. The present authors employed a culture medium of strong selective action for the Klebs-Loeffler bacillus. Where the spleen was infected the lungs in all cases contained the bacilli, and seventy-five per cent. were broncho-pneumonic.

An escape of the bacillus may take place (1) by direct transference from one part to another; (2) along existing passages—œsophagus, trachea, etc.; (3) along lymphatics, since the bacilli are frequently found in cervical and bronchial glands; and, lastly, (4) by the blood stream to the spleen, liver, kidneys, etc.

The authors concluded that Dr. Sidney Martin's hypothesis regarding a process of intoxication from the seat of infection was hardly tenable, as toxin must be produced wherever the bacilli exist, and urged in consequence the energetic use of antitoxin in all serious cases.

In reply to Dr. William Hunter and Dr. Goodall, Dr. KANTHACK stated that both lungs and spleen containing the bacilli may exhibit no evident sign of disease. The lungs of four non-laryngeal cases contained bacilli.

Epithelioma in an Œsophageal Pouch.

Dr. NEWTON PITT exhibited an epithelioma occurring in a pouch arising from the lowest part of the pharynx.

The President (Mr. BUTLIN) observed that he knew of no other case of this kind.

Ernest Waggett.

MANCHESTER MEDICAL SOCIETY.

("Brit. Med. Journ.," Feb. 15, 1896.)

President—HENRY ASHEV, M.D.

Myxædema.

Dr. THOMAS HARDY showed a series of cases of myxædema, some of which had been treated regularly with thyroid and others only intermittently. The former had lost all the characteristic features of the disease; the latter still presented these features. In one case, apparently cured after a year's treatment, all the symptoms returned after two months without thyroid feeding. On recommencement the patient became perfectly well. In another case an acute attack of gout supervened on two occasions with the commencement of treatment.

Ernest Waggett.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

December 6th, 1895.

President—Sir THORNLEY STOKER.

SECTION OF SURGERY.

Mr. WOODS recorded a successful case of operation for extradural abscess in the cerebellar fossa, secondary to sinus phlebitis and middle-ear disease.

Mr. WOODS related the sequel to the case of excision of half of the larynx described on page 685 of the JOURNAL OF LARYNGOLOGY, 1895. The patient died of pneumonia, following an attempt at removal of an infected gland, five months after the excision.

Ernest Waggett.

December 13th, 1895.

President—THOMAS GRIMSHAW, M.D.

SECTION OF MEDICINE.

Dr. J. J. BURGESS described an extremely acute case of tonsillitis, in which frequent hæmorrhage took place from the surface affected. This was independent of an abscess which was opened, and persisted for some days after acute symptoms had disappeared.

Mr. WOODS suspected ulceration of a vein.

Dr. BURGESS also described a case of sudden glottic spasm with apparent asphyxia, relieved after six hours of artificial respiration, and followed by the rash of measles. Other speakers mentioned instances of the onset of exanthemata with convulsions.

Ernest Waggett.

BRITISH MEDICAL ASSOCIATION.

Meeting, 1895. ("Brit. Med. Journ.," August 24th, 1895.)

President—Dr. PAVY.

SECTION OF MEDICINE.

ABSTRACT OF DISCUSSION ON DIPHTHERIA AND ITS TREATMENT BY ANTITOXIN.

Dr. SIDNEY MARTIN: The author defined diphtheria as a membranous inflammation of a mucous membrane, due to the invasion of the bacillus diphtheria, which did not enter the body, but formed poisons in the membrane, which were absorbed and produced general symptoms—fever, etc., as well as palsy, due chiefly to nerve degeneration. The pathological test of diphtheria was nerve degeneration. In the majority of fatal cases, death was due to the effects of the poisons in combination with (1) mechanical obstruction, or (2) broncho-pneumonia, or (3) mixed infection,—the poisons producing syncope, suppression of urine, asthenia, or paralysis.

Two classes of chemical poisons were to be distinguished in this disease: one present in the membrane, the other in the tissues, blood, and spleen.

The first might be precipitated from a saline extract of the membrane by means of alcohol. Intravenous injection of a minute quantity of the precipitate into a rabbit produced slow paralysis, wasting, diarrhoea, and sooner or later death, *post-mortem* examination showing degeneration of nerves and fatty degeneration of skeletal and heart muscle. A single infinitesimal dose, therefore, produced the pathological changes of diphtheria, suggesting that it belonged to the class of ferments.

The second class, to be obtained from the blood, etc., included special albumoses and an organic acid. The latter produced some nerve degeneration, but no progressive paralysis. The albumoses, similar in reaction to the albumoses of digestion, had peculiar toxic properties.

Injected intravenously they produced in one or two hours a rise of temperature, which could be maintained by repeated injections. Large doses might cause death, or extensive degeneration of nerve and heart muscle; but the characteristic of their effect lay in the fact that they produced palsy only in multiple doses, unlike the ferment, or toxin so-called. Whereas the toxin produced necrosis when injected subcutaneously, the albumoses produced merely œdema. The fatty degeneration of the heart,

found also in poisoning by anthrax and septic cocci where no ferment was produced, was probably therefore due to the albumoses, and not to the toxin directly.

These various poisons might be produced in vitro. The ferment or toxin was obtained by cultivation of the bacilli in an air current, in alkaline broth with seventy-five per cent. of salt, containing peptone (two per cent). A minute single dose, after filtration, given intravenously, caused the nerve degeneration characteristic of diphtheria. On the other hand, if alkali albumen was substituted for the peptone in the broth, the albumoses with the specific action described above were formed, together with the organic acid.

The author concluded that the ferment secreted in the membrane was absorbed into the body, and there produced by its action on the proteids certain products of digestion—albumoses of specific toxic quality. The body was poisoned, not by a single large dose, but by numerous small doses gradually producing their effects.

With regard to the antagonistic effect of antitoxin to these poisons, the nerve and heart muscle degenerations in the rabbit afforded a delicate test.

Injection of antitoxin alone produced no ill effect whatever.

The author then gave details, with chart, of an experiment demonstrative of its antagonistic reaction to poisoning by toxin.

A rabbit receiving toxin at once rapidly lost weight, became paralysed, and died on the sixth day. A second, receiving an equivalent dose of antitoxin, had no untoward symptoms, and after slaughter on forty-first day showed a certain amount of nerve degeneration (the dose of antitoxin was therefore not sufficient), but no degeneration of heart muscle. The first rabbit, *post mortem*, displayed marked fatty degeneration of heart muscle, as well as nerve degeneration.

In an experiment dealing with the counteracting of large repeated doses of albumoses, the rabbit receiving no antitoxin became paralysed, and showed marked fatty degeneration of the heart and nerve degeneration; while the second, receiving antitoxin as well as albumose, remained lively and well, the heart showing no fatty degeneration, and nerve degeneration only to an insignificant extent.

The antitoxin proved to have but slight effect on the rise of temperature due to albumose.

Dr. GOODALL: The symptoms characteristic of severity in a case were extensive exudation, persistent exudation, frequent pulse, albuminuria, pyrexia, adenitis, drowsiness; and these were toxic symptoms. Still graver symptoms were—frequent vomiting, anuria, hæmorrhagic condition, convulsions; the last a sure sign of approaching death. Anuria, either partial or complete, and usually preceded by albuminuria, and accompanied by progressive cardiac failure, might occur in patients apparently doing well. These symptoms were brought prominently forward because some observers had attributed them to antitoxin.

Comparative statistics were given, showing that among a series of 105 cases (relatively severe on the score of age and type of disease) treated with antitoxin, the mortality was at the rate of 22·8 per cent., as

against a rate of 33 per cent. in 136 cases not so treated; and, taking cases of under ten years of age, as 24·4 per cent. to 39·2 per cent. With regard to incidence of albuminuria, antitoxin treatment gave 53·3 per cent. (9 anuria), against 49·2 per cent. (12 anuria) not so treated. Nephritis was not observed in one of the 241 cases. With regard to paralysis, antitoxin gave 17·1 per cent. against 14·7 per cent. Paralysis followed severe cases more frequently than mild ones. Treatment, therefore, which enabled patients to survive the membranous stage was conducive to an increase in the paralysis percentage.

Dr. ALEXANDER JOHNSTONE considered that the disappointing results of antitoxin treatment might be explained on the supposition that the processes concerned were more complicated than could be attributed solely to Klebs-Loeffler bacillus and its chemical products. The results, as far as they went, were favourable to the use of the remedy, but nothing striking was to be expected.

Prof. Dr. VON RANKE (Munich) spoke strongly in favour of the antitoxin treatment, giving statistics of a series of 163 cases. The percentage of deaths, 17·7 per cent. (or 18·8 per cent. in those proved bacteriologically), was considerably less than half of those of eight previous years. In cases of laryngo-stenosis the mortality was nearly half that of former years, and in not a single case did laryngo-stenosis supervene after injection. Moreover, in 28·4 per cent. of undoubted diphtheritic croup the stenosis subsided, as against 5 per cent. formerly. Under the serum treatment the disease lost its progressive character.

Mr. LENNOX BROWNE desired to deprecate the suggestion that he was adverse to the serum treatment, but stated that he was anxious for truly critical investigation. He contended that Dr. Sidney Martin's experimental results as to nerve and cardiac muscle degeneration were not borne out at the bedside. With regard to nutrition, moreover, it had been shown that serum, whether antitoxic or normal, was prejudicial. Parenchymatous changes in the kidneys were almost constantly found, *post mortem*, in antitoxin cases; but the importance of this point was minimized by the observation of Dr. Woodhead that the kidneys were, in some degree, affected in all cases of diphtheria. It was said that antitoxin was not suitable for mixed cases, and Dr. von Ranke had found pure culture of Klebs-Loeffler bacillus in but 12 out of 163 cases. Finally, at the North-Western Fever Hospital, under the favourable circumstances there existing, the mortality during 1894 had been but 27 per cent.—exactly the same as the first 100 cases treated with antitoxin.

Prof. Dr. A. BAGINSKY (Berlin) had found the percentage mortality reduced from 41 per cent. to 15·6 per cent. under the serum treatment, and gave figures showing that, at all ages under ten, the rate was more than halved. In every respect, moreover, the condition of the patients was much benefited, laryngeal obstruction commencing in no case (in a series of 525) after injection.

Dr. SIMS WOODHEAD considered that in England the serum was not given in sufficiently large doses. One of the most important effects produced by the treatment was an alteration in the type and course of the disease, with less tendency to complications.

Dr. HERMANN BIGGS (New York) stated that the death rate in New York from diphtheria had been reduced by over 40 per cent. by antitoxin treatment. He spoke highly of the immunizing power of the serum. In an institution in which 107 cases had occurred in 108 days, only one mild case occurred in the first thirty days after injection of 200 units of Behring's preparation in all persons exposed to infection. One case occurred during the subsequent thirty days and five cases shortly after this. Two hundred and twenty-five units were then injected, and no more cases occurred. In three other institutions similar results were obtained. No unfavourable symptoms occurred in any of the 800 persons injected.

Dr. CAMPBELL HALL spoke in recommendation of the treatment by antitoxin.—*Abbreviated from "Brit. Med. Journ."* Ernest Waggett.

SECTION OF PUBLIC MEDICINE.

President—ERNEST HART, D.C.L.

A DISCUSSION ON THE DIAGNOSIS OF DOUBTFUL CASES OF DIPHtheria.

E. KLEIN: The opener began by giving details of the microscopic appearances and culture phenomena of the Klebs-Loeffler bacillus, remarking incidentally that he was unable to recognize a definite relation between the length of the bacilli and the severity of the cases. As a rule, in typical cases the bacilli were found abundantly, or even in pure culture.

In a second class, clinically and epidemiologically true cases of diphtheria, the bacilli were swamped by immense quantities of other microbes, and in these cases the bacilli were often not found in culture until repeated careful search had been made.

In a third class, bearing no obvious evidence in their history or primary symptoms, correct diagnosis was of the utmost importance. Such diagnosis was often extremely difficult owing to scarcity of the bacilli. In these cases the author employed a new method of plate cultivation. The suspected exudation was rubbed gently over the surface of the agar, which had been previously allowed to solidify, and which was subsequently incubated at 37 degrees C.

Next day cover-glass impression specimens—taken, if necessary, from the entire number of colonies present—could be examined microscopically. In this manner positive evidence has been obtained where repeated tube cultivations had proved negative.

In a fourth class, of membranous sore throats, no bacilli were to be found in the exudation, which contained no fibrinous matrix. Such cases were recognized as pseudo- or cocco-diphtheria.

The culture test was of great importance in cases seen after disappearance of membrane, and in healthy persons exposed to infection. The results of inoculation experiments on the guinea-pig were then detailed, the author remarking that no definite relation existed between the virulence of the culture, as so tested, and the severity of the original

case. With regard to the existence of transitional states between pathogenic and non-pathogenic bacilli, the author withheld his judgment for the time being. Those bacilli which morphologically and in respect of culture were typically diphtheritic, had pathogenic action; while those which were non-pathogenic, though resembling the bacilli morphologically, showed some differences in cultural respects.

The results of inoculation, coupled with the identity of poisonous products obtained by culture with those found in the human subject, as determined by Sidney Martin, enabled us to say that the Klebs-Loeffler bacillus was the true cause of diphtheria.

Dr. HERMANN BIGGS (New York) recommended examination in healthy persons exposed to infection, with a view to isolation or immunization, according to the result. He also recommended examination in cases of throat inflammations and of convalescence from diphtheria. He described the technique and experience gained from 25,000 cultures.

Dr. GOODALL spoke of the sources of error, and considered that, as return cases were rare, it was unnecessary to keep patients in hospital more than six weeks if perfectly recovered.

Dr. UNDERHILL desired to know if cases clinically healthy, though bacilli were detected bacteriologically, should be notified as diphtheritic; and whether in such instances isolation was necessary until the bacilli disappeared. An attack appeared to afford no protection.

Dr. HERMANN BIGGS, in reply, stated that isolation was maintained in New York until disappearance of bacilli.

Dr. KLEIN, in reply, repeated his statement as to the long and short variety of bacilli. He preferred for examination a piece of membrane or simple scraping, to the results of swabbing.—*Abbreviated from "Brit. Med. Journ." Report.*
Ernest Waggett.

THE HUNGARIAN OTOLOGICAL AND LARYNGOLOGICAL SOCIETY.

Meeting, 17th October, 1895. ("Monatsschrift für Ohrenheilkunde.")

Dr. ZWILLINGER. *Foreign Body in the Nose for Eight Months; Fætid Purulent Discharge; Asthma.*

J. B., aged fifty-seven, presented himself on the 5th August, 1895, complaining that on the 12th of December, 1894, his nose had been plugged on account of epistaxis, and that neither the doctor who applied the plug nor others whom he had consulted since had been able to remove it. It caused extreme pain and difficulty of breathing, and emitted so objectionable a smell that people avoided him.

On anterior rhinoscopy the left nostril was seen to be filled with pus. The mucous membrane was a dull bluish-red in colour, much swollen but no foreign body was visible. By means of the probe, however, an

obstruction was felt in the depth of the nose, soft to the feel, and into it the probe could be pressed for about half a centimètre. By means of posterior rhinoscopy the left choana was seen to be occupied by a foreign body covered with dull grey crust. The posterior extremities of the turbinated bodies were not visible. The right choana was normal. Endeavours were made to extract the body or to push it backwards, but without success, and a suspicion was entertained that it might be a new growth; but eventually the end of a string attached to the mass was pulled out, and by exercise of a considerable degree of force the foreign body itself was brought away. As exhibited to the Society, the extraordinary size of the plug and its offensive smell, even after six weeks, was striking, and quite explained the sufferings of the patient.

After the removal of the plug nasal irrigation with antiseptic lotions was practised. The suppuration soon diminished, the fœtor disappeared, and the respiration again became normal.

Dr. LICHTENBERG. *Acute Tympanitis; Subdural Abscess; Operation; Recovery.* Two cases.

The first patient was seen on the 14th August, 1895, and stated that ten weeks previously, after a journey, he experienced severe pain in and behind the right ear, with marked diminution of the hearing power. On the sixth day consulted an aurist, who performed paracentesis, removing a considerable amount of secretion. The patient was dismissed as cured in fourteen days as far as his ear was concerned; and on account of pain behind the ear, which was attributed to some nervous disturbance, he was referred to a nerve specialist. After four weeks' electrical treatment he consulted another physician, who applied two leeches to the mastoid, but without any result.

On examination the external meatus was found normal, and there was very little pus in the deeper parts. There was a small, insufficient perforation in the postero-superior quadrant. During catheterization there were fine, feeble crepitations. The mastoid process was extremely tender. Severe pains were present behind and above, which did not subside even in the night.

The perforation was too small, and that was so enlarged downwards that irrigation was thoroughly practised so as to attempt complete evacuation of the pus from the tympanum.

1. The hearing power on the affected side was, for the watch, 0-60; Weber lateralized in the affected side, Rinne, minus. In spite of the free discharge and the energetic use of cold applications, pain did not cease. The temperature was 37.2 C., the pulse 95. After five days the pains became unbearable, and on the 18th August the mastoid was opened. The cortex was healthy, the pneumatic cells in the mastoid were carious and filled with pus. The antrum was reached at a depth of two and a half centimètres, and was found to be quite carious and full of pus. There was a fistula above, from which a purulent discharge entered the operative channel. The antrum was laid completely open, and with a strong electric light everything could be seen as far as the aditus and the short process of the incus. All the carious bone was removed, and the dura mater was

exposed. The case, therefore, fell into the category of subdural abscess. The usual dressing with sterilized gauze was applied. The dressing was left for five days. There was much pus lying free in the operative opening. Dry swabbing was carried out, and syringing carefully avoided. Slight pains persisted for three weeks, chiefly in the occipital region. The perforation in the drum membrane healed up completely in ten days and the suppuration came to an end, the hearing power increasing to four-sixtieths. There was, therefore, a subdural abscess.

2. The patient complained, in the beginning of December, 1894, of pains in and behind the right ear, which persisted off and on until he presented himself for treatment, on the 18th of June, at the policlinic. He was very much emaciated, the meatus was swollen, the tympanic membrane opaque and presenting the normal inclination. The mastoid was extremely tender, was infiltrated and œdematous; on catheterization there were coarse crepitations. According to the patient's statement, there had been no discharge from the ear. The diagnosis of empyema of the mastoid was made, and the operation was carried out two days later. Before the operation paracentesis and catheterization was practised; much thin pus was expelled. The mastoid was opened in the usual way. After the removal of a thin layer of bone, thick pus was reached, and the mastoid was found to be full of granulations and completely carious. Before the operation the temperature was 39·8 C. Six days later the dressing was changed; there had been no fever, the pains had ceased at once, and had not returned. Syringing was carefully avoided. Complete cicatrization took place in six weeks.

The hearing in the second case increased to thirty-sixtieths, which, before the operation, had been *nil*. Even at the first dressing there was no pus found in the ear, and the membrane had healed up.

Dundas Grant (Trans.).

AUSTRIAN OTOLOGICAL SOCIETY.

Meeting, June 25th, 1895. ("Monatschrift für Ohrenheilkunde.")

Prof. GRUBER *in the Chair*.

Dr. BING. *A Case of Cured Suppuration of the Middle Ear.*

This was a female patient with chronic suppurative inflammation of the left middle ear, with a polypus filling the external meatus and growing from the attic. At the present moment the otorrhœa and inflammation have completely subsided, and there remains of the membrane only the antero-superior quadrant, which is thickened and somewhat calcified, as well as the thickened manubrium, from which a band of connective tissue extends to the exposed head of the stapes. Posteriorly was seen the tendon of the stapedius muscle, and above also the projection of the Fallopian canal, which was covered with a grey shining membrane. In

the same way the promontory, which was spotted with small ecchymoses, and the margins of the niche for the round window, were visible, a thin, transparent cicatrix extending to this latter from the inferior peripheral remains of the tympanic membrane. Whispered speech could be heard at the distance of two mètres.

Dr. BING showed the case, not only on account of the interesting appearances, but also to illustrate the possibility of bringing about a cure in cases of well-established inflammation in the attic by so-called conservative treatment, even without the removal of the malleus, as the case has remained for a year and a half without recurrence. It remains to be seen whether this condition will persist; but it must be recognized that the removal of the ossicles does not afford an absolute guarantee of or freedom from recurrence.

He looked upon the removal of the ossicles in such cases as a proceeding which rendered the circumstances more favourable for further treatment, and as one which, in the absence of the limb of the incus, produced no injurious effect upon the hearing power. In illustration of this he showed a second case, in which extraction of the malleus was indicated. This was one of chronic suppuration of the middle ear, on the right side, in a woman of about forty years of age, who for a long time had been under treatment without benefit, and in whom, along with a perforation in the membrane of Shrapnel, there was a slit-like aperture behind the handle of the malleus, and in the depth of which a quantity of thick pus was shut in, which could only be removed by means of a probe. The peculiar, rare, slit-like form of this perforation he took to indicate that, at an earlier stage, there had been an extensive loss of substance, on the margins of which cicatrization had taken place, uniting them with the inner wall of the tympanum, so that only the free handle of the malleus bounded the slit in front.

Dr. MAX. *Examination of Growths removed from two Cases under Prof. Urbantschitsch.*

1. *The bony growth removed from the meatus* was found to have no connection with the mastoid processes beyond fibrous adhesion, but on the other hand it was developed in connection with the cartilaginous meatus. After incision of the skin over the mastoid process, parallel to the insertion of the auricle, and forward dissection of the integuments, the tumour presented as a free movable structure, which, after its fibrous connection with the anterior aspect of the mastoid was broken down, was found to be firmly connected with the posterior and inferior cartilaginous meatus. After section of the meatus in its circumference behind and above as far as the anterior wall, the tumour could be detached. This reached as far as the drum membrane, which it pressed deeply into the tympanum, and was found to be of irregular surface, with two prominent parts, of which one projected from the meatus and the other was close to the membrana tympani; its long diameter attained three centimètres, the vertical 2·5; it was as hard as bone. Behind the tumour there was a large collection of cheesy matter. After the removal of the tumour there was seen in the back part of the meatus a large cavity, whose floor,

eight days later, when the swelling went down, could be distinguished as the membrana tympani, with remains of the manubrium, which was distinctly to be recognized. The posterior wound healed by first intention. The hearing, which previously was two paces for moderate speech and contact for the watch, was, after the operation, fifteen paces for whisper and fifteen centimètres for a watch normally heard at one hundred and twenty.

2. *Tumour situated at the posterior extremity of the helix* in a man, which on account of its variation in size was taken to be a fibro-angioma, and turned out to be a bluish-red structure about the size of a small hazel nut, enclosed in a firm capsule and completely circumscribed. It was removed *in toto*. The turgescence which occurred from time to time did not arise in the tumour itself, but in the extremely vascular cutis which covered it. On microscopical examination it was found to be a fibro-lymphangioma.

Dr. GOMPERTZ. *A Method of Preventing Renewed Adhesion of the Manubrium to the Promontory after Separation.*

History of case. On both sides were the residues of chronic suppuration of the middle ear. On the right side there was perforation and calcification, and the watch was heard on contact only. On the left side the whole membrane had gone, with the exception of a small area in the upper part containing the handle of the malleus. Above and behind, the union between the incus and the stapes could be seen to be intact. The umbo was attached to the promontory by firm cicatricial tissue. The mucous membrane was pale and dry. The watch was heard at three centimètres, a whisper at sixty. Catheterism and rarefaction of the air in the meatus produced no improvement on either side. Rinne was negative in both. After the severance of the adhesion, a small plate of white celluloid, two millimètres in thickness, and carefully sterilized, was introduced between the extremity of the manubrium and the inner wall of the tympanum. This was a strip of celluloid paper, three and a half centimètres in length, one millimètre wide at the ends, and four in the middle. This strip of celluloid was held with the forceps, pushed into the meatus, and so placed that the middle broadest part came to be between the manubrium and the promontory, while the two ends springing open adapted themselves to the anterior and posterior wall of the meatus. They caused no inconvenience and gave rise to no secretion, and were left in position for fourteen days, after which time the wounded surface had completely healed over. Two months later it could be seen that the handle of the malleus lay quite free. The hearing power, immediately after the operation, increased from sixty centimètres to four mètres, and, when last tested, whispering speech was heard at from three to four mètres.

Prof. GRUBER considered the duration of the observation too short to exclude the possibility of re-establishment of the adhesion.

Prof. POLITZER thought the operation should only be performed when the chain of bones was intact, as in case of a defect in the long process of the incus no good result could be expected.

Dr. BING thought that in such a case tenotomy of the tensor tympani might well be performed, still further tending to prevent readhesion.

Dr. GOMPERTZ replied to Prof. Gruber that the diseased process had come to an end, as the otorrhœa had long ceased, and that it was hardly possible for readhesion to take place when the surfaces were covered with epithelium : and to Dr. Bing he pointed out the circumstance that the other ear was the worse one, which was a reason for his not performing tenotomy, an operation of which the most that can be said is that in the most favourable cases it only does no harm. He did not think it advisable to risk the remains of hearing power by a procedure of doubtful advantage, holding to the principle *primum non nocere*.

Prof. POLITZER. *Bilateral Congenital Malformation of the Ears in a Child.*

The drawing showed in the left auricle the frequently observed appearance of an S-shaped swelling, in the upper part of which there was the rudiment of cartilage, and a small blind depression which represented the outer opening of the cartilaginous meatus, which felt like a solid cord. In the upper part of the right auricle there was almost the same malformation as in the left, but the lower larger half consisted of a loose pendulous lobule, on the lateral surface of which there was an auricular appendage about the size of a small pea. The portions of the temporal bone corresponding to the seat of attachment were flattened, and the soft palate during crying underwent very slight movement.

Prof. Politzer considered, therefore, that the malformation of the auricle and the atresia of the meatus were combined in this case with a rudimentary development of the middle ear, but that the labyrinth was normal, inasmuch as the child was affected by noises. He drew attention to the symptom of diminished mobility of the palate, which he was the first to point out, and which indicated with certainty that the deformity affected not only the external ear, but simultaneously the tympanum and the Eustachian tube.

Prof. POLITZER. *Two Pathological Preparations showing Cholesteatoma Formation in the Temporal Bone.*

The first was from a deaf woman, aged eighty. There was an extensive defect in the upper wall of the osseous meatus, which led into the cicatrized tympanic cavity, and into a large dilatation of the mastoid antrum. In this cavity there was a stratified cholesteatoma the size of a small nut, pearly and shining, which could be lifted out complete. Of the membrana tympani only the antero-superior quadrant remained, and this at its posterior part adhered to the inner wall of the tympanum. The tympanic orifice of the Eustachian tube was closed by a cicatrix.

The second preparation was from a woman, aged fifty-six, who was deaf in the left ear owing to a former chronic suppuration. The anterior half of the membrane is preserved, but was much thickened : the postero-superior part has quite disappeared, and the perforation was increased in size owing to a defect in the postero-superior wall of the meatus. Through this hole the epidermis had grown into the tympanic cavity, and the whole upper space of the tympanum as well as the mastoid antrum was filled with a cholesteatoma covered with an iridescent pellicle.

Meeting, October 29th, 1895.

President—Prof. GRUBER.

Prof. POLITZER. *A Successful Case of Mastoid Operation by Körner's Method.*

The patient, a girl, aged nineteen, had suffered from right chronic suppuration in spite of treatment for three years. Troublesome symptoms appeared—headache, vertigo, pains in and behind the ear—which did not yield. On the 9th of May, 1895, the mastoid operation, in conjunction with Körner's plastic method, was performed.

The postero-superior wall of the osseous meatus and the outer wall of the attic were removed. The postero-superior membranous part of the cartilaginous meatus was divided by two parallel incisions reaching to the concha, forming a flap, which after replacement of the auricle were pushed into the cavity in the bone, and kept there by means of a tampon. The subsequent course was normal. In the beginning of October suppuration ceased.

The present condition, five months after the operation, shows the mucous membrane of the promontory and of the attic to be dry and smooth, the hearing distance for whispered voice three mètres, and for acoumeter fifteen centimètres.

It had not been found necessary to extend the flap so far into the cartilage of the auricle as Körner recommended, and one is thus able to avoid unsightly enlargement of the external auditory meatus.

Dr. GOMPERTZ showed a patient in whom he had carried out Zaufal's radical operation with Körner's plastic one for *Cholesteatoma of the Right Middle Ear*.

The patient was one in which recurrence had taken place in spite of conservative treatment. After remaining well for nearly two years, at the end of April, 1895, he commenced to suffer with vertigo and headache. In the neighbourhood of the small perforation in the postero-superior quadrant there was only a delicate cholesteatomatous pellicle. Within the next few days, along with increase of the discomfort, there was swelling of the external meatus; then outgrowth of granulations projecting from the perforation. At first the patient refused operation, only consenting when the polypi completely filled the meatus.

On June 8th these were removed and the mastoid opened by Zaufal's method. In cutting Körner's flap the concha was not encroached upon, yet it was sufficiently long. On June 14th the wound had healed by first intention. Forty-five days after the operation the whole new cavity was dry and covered with a delicate epidermis.

Prof. URBANTSCHITSCH complimented Dr. Gompertz on his good result.

Dr. KAUFMANN. *A Case of Ménière's Disease.*

The patient, a woman, aged thirty-one, under the care of Prof. Gruber, until a recent attack of influenza had always been healthy.

On the evening of the 6th August she hurried into the theatre, and while still hot drank some water. On her way home she observed a noise in her ear, and woke suddenly in the middle of the night with violent giddiness, vomiting, intense noise, and complete deafness in the left ear; the menses, which were then at their second day, stopped. Vomiting was repeated during the next three days at least six or eight times a day, and the vertigo was so severe that for twelve days the patient was unable to leave her bed. The deafness remained unaltered. The menses did not reappear until after a lapse of double the usual period. There was no sign of other disease or hysteria; the appearance of both membranes was normal, also the Eustachian tubes. In the left ear there was complete deafness for watch and speech; only deep-toned tuning-forks were heard by air conduction. Weber was heard loudest in the right ear, and the vertigo was intermittent, especially in the dark, and was very distinct when she moved with her eyes shut. All treatment up to the present had been without result; now a course of pilocarpin had been commenced.

Prof. POLITZER remarked that the case was very similar to the first one observed by Ménière.

Prof. GRUBER stated that the cases of pronounced Ménière's disease observed by him were usually bilateral, especially those which came on suddenly with vertigo and deafness. Unilateral cases like this one were rare. The tuning-fork investigations had little value in these diseases, and the establishment of a certain diagnosis by means of the tuning-fork alone was not possible. He had never seen any improvement take place in cases in which there was an effusion of blood into the labyrinth.

Dr. URBANTSCHITSCH mentioned a very similar case in his private practice of unilateral deafness, and he said the causes of sudden deafness were not to be sought for alone in labyrinthine hæmorrhage, but also in central changes.

Prof. POLITZER looked upon Dr. Kaufmann's case as a disease of the labyrinth, and not nervous deafness; he attached considerable importance to the investigation with tuning-forks, especially with regard to the reaction for deep tones in conjunction with the other symptoms.

Dr. ALT mentioned a case of leuchæmia in which Ménière's symptoms appeared suddenly.

Dr. GOMPERTZ mentioned that such symptoms sometimes depended upon embolism due to heart disease.

Prof. GRUBER. *A Case of Carcinoma of the Ear.*

The patient, aged sixty, stated that he had suffered since infancy with left otorrhœa, and for three months with facial paralysis, and for the last six weeks with otalgia. On examination there was found complete left-sided facial paralysis; the left meatus filled with gangrenous polypi. The mastoid process was externally normal. There was deafness for the watch and the voice. Weber was negative. A diagnosis was made of chronic suppurative median otitis, involving the mastoid process, and the radical operation with plastic treatment of the membranous meatus was carried out. The mastoid process was found sclerosed, and no antrum

was found ; the tympanic cavity was completely filled with thick granulations. The subsequent progress was without fever, but there was a very rapid re-growth of the granulation masses, which soon projected from the large wound.

In the middle of September there was dense infiltration of the margin of the wound, and it was clear that the case was one of a malignant new growth. Microscopical investigation confirmed the diagnosis of carcinoma, which very probably had its origin in the mucous membrane of the middle ear. At the present time the meatus and the wound are filled with masses of carcinoma, in the form of an ulcerated tumour the size of an egg, above the level of the mastoid. On the posterior surface of the lobule is a metastatic growth of the size of a walnut. There is infiltration around the wound to the thickness of a finger ; the glands are affected as far as the supra-clavicular fossa. There are no other metastases perceptible. The facial paralysis and deafness continue, the patient has lost flesh, and there is some cachexia. Recently he had seen three similar cases, which were all operated on because the nature of the process was not recognized, and he warned his hearers against carrying out operations when there was the slightest suspicion of a malignant new growth being present.

Demonstration of a Preparation from a Case of Acute Median Otitis without Perforation, with Pyæmia resulting from Phlebitis in the Bulb of the Jugular Vein.

The preparation was taken from a patient, aged nineteen, in the maternity wards, who on the 19th of September, 1895, was examined in Prof. Gruber's clinic for left acute median otitis of two days' duration. Paracentesis of the tympanum was performed, and the patient was ordered to return next day. Next day high fever came on, and on the 21st the patient had a normal labour. The fever continued. There were severe general symptoms, pains in the joints, restlessness, delirium, and, on the 23rd, death. The *post-mortem* diagnosis by Prof. Kolisko was as follows : "Pyosepticæmia ex thrombo-phlebitide venæ jugularis in bulbo jugulari ossis temporalis sin. post otitidem mediam acutam sinistr. cum abscesso metastatico lobi inferior. pulmon. sinistr. et pleuritide sinistr. cum phlegmone metastatica musculorum anti-brachii utriusque et supæ (sic) dextr., cum tumore lienis acuto, degeneratione parenchymatosa organorum nec non cum endometritide metastatica post partum."

Dr. FERDINAND ALT. A Test for the Determination of an Obstruction to the Conduction of Sound.

This was to take the place of Weber's experiment, or to support it and is as follows : When one sings a note with the mouth closed—or, to be more exact, when one hums a note—and closes one ear with the finger, the tone is heard only in the closed ear, and this is the same whether the tone is deep or high, loud or soft. Similarly in a patient in whom Weber's test is lateralized in one ear, a sound uttered with closed mouth is heard only in the ear in which the Weber tone is lateralized. The experiment gives a positive result in all cases in which Weber is lateralized in one ear, and is only useless in cases in which there is

unilateral destruction of the membrane or very large perforation. In these the sound-waves can escape more easily outwards than towards the labyrinth. If, on the other hand, there is a small perforation in the other part of the membrane—as, for example, in Shrapnel's membrane—through which the sound-waves cannot easily escape, the test gives a prompt result. The author finds that this gives him clearer diagnostic evidence in cases of unilateral labyrinthine disease.

Prof. POLITZER found that his tuning-fork test in cases of swelling of the lining of the Eustachian tube was very practical, and thought that Alt's test might be very useful in such cases. He doubted whether in a normally closed tube a column of air could enter into sympathetic vibrations.

Dr. ALT replied that the test was found practical in swelling of the tube because the bone-conduction came into play, but it was not so prompt as under other circumstances. He thought, further, that during singing with closed mouth the muscles of the tube were stretched, and the tube, therefore, rendered more patent.

Prof. GRUBER had tried the experiment, and found that it gave a clearer result even in cases of destruction of the membrane. This test was always valuable when a tuning-fork was not at hand in order to take the place of Weber's test.

Meeting, November 26th, 1895.

President—Prof. GRUBER.

Prof. GRUBER. *The "Late Stitch" after Artificial Opening of the Mastoid.*

The patient was a man, aged fifty-five, in whose mastoid an artificial opening had been made on the 21st October, 1895. There was a bony cavity extending over the whole length of the mastoid process, about three centimètres in length, one and a half in width, and one in depth, with smooth walls, and filled with pus and soft granulations which readily bled. After-treatment was carried on in the usual way up till the 31st of the same month, during which time the patient was free from pyrexia or any other contra-indicating symptom, when Prof. Gruber practised the "late stitch," bringing together the edges of the wound by means of sutures, and leaving in the lower angle a strip of iodoform gauze. There was no sign of reaction or accumulation of pus, and the strip of gauze was soon removed. On the 8th November the stitches were extracted, and up to the present time—twenty-six days—there has not been the slightest unfavourable symptom. Prof. Gruber remarked that he had carried out this method in a considerable number of cases, both in his clinic and elsewhere, with the best results, and in no single case were there any undesirable effects. The "late stitch" shortens considerably the duration of the treatment.

Prof. GRUBER. *An Abnormal Opening in the Squamous Portion of the Temporal Bone.*

In an otherwise normally-developed adult temporal there was found, about five millimètres above the upper margin of the zygomatic process and one centimètre in front of the external auditory meatus, a round hole, about four millimètres in diameter, with a smooth margin, through which the cranial cavity communicated with the outer ear. Looked at from the cranial cavity, this hole appeared to be the perforated floor of an excavation whose diameter was about double that of the orifice seen from the outside. The walls of this cavity were quite smooth, and it was found to lie in an angle constituted by the bifurcation of the groove for the middle meningeal artery. It appeared as if at this place there had been a dilatation (aneurism) of the middle meningeal, which, bit by bit, had eaten into the bone. It was obvious that this hole was not an artificial product, as its walls were perfectly smooth. It would not be impossible for aneurisms in this place to give rise to those objectively perceptible noises which can be heard in contact with the skull, and which are isochronous with the pulse. These holes in the temporal bone probably possess pathological aspects of the greatest importance.

Prof. GRUBER. *An Abnormal Fissure in the Roof of the Tympanic Cavity.*

The preparation showed, at the spot where the tegmen tympani is inserted into the petrous bone, a pronounced fissure, about one centimètre in length, through which the tympanum communicated with the cranial cavity. Through it, as the condition of the dura mater showed, a previous chronic suppurative inflammation had extended from the tympanum to the meninges, and given rise to a chronic circumscribed pachy-meningitis. In the newborn such a fissure was frequently observed between the tegmen tympani and the petrous bone, and the one he had just shown could be looked upon as a defect in development.

Prof. POLITZER. *A Demonstration of Pathological and Anatomical Preparations.*

1. *A Preparation showing a Defect in the Posterior Segment of the Tympanic Membrane and Complete Calcification of the Antro-Inferior Remnant of the Membrane.* This was the result of middle-ear suppuration. The mucous membrane of the posterior wall of the tympanum was much thickened and very irregular, and on the promontory there was a calcareous deposit of the size of a small lentil. The other interesting points were an extensive dentate calcification of the lining of the mastoid antrum and calcification of the tendon of the tensor tympani.

2. *A Circumscribed Calcareous Deposit* in the mucous membrane on the promontory below the fenestra ovalis.

3. *Extensive Atrophy and In-drawing of the Membrane.* The central atrophic part of the membrane was very distinct from the thickened peripheral parts.

4. *Preparation showing an abnormally wide Fossa Jugularis*, seen from the under surface of the temporal bone. There was an irregular

dehiscence three millimetres in size, through which the jugular fossa communicated immediately with the internal auditory meatus. In another preparation in which the jugular fossa was enlarged so as to reach the upper surface of the petrous bone, there was a dentate dehiscence on the posterior surface of that bone.

Prof. POLITZER suggested that in cases of dehiscence between the jugular fossa and the auditory meatus subjective noises might be occasioned by a swelling of the jugular vein and pressure on the auditory nerve.

Dundas Grant (Trans.).

DUTCH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL SOCIETY, ARNHEIM.

Third Annual Meeting, June 9th, 1895. ("Monatschrift für Ohrenheilkunde.")

President—Prof. GUYE.

Dr. J. H. REINTJES. *Case from which a Growth had been Removed from the Entrance of the Larynx.*

A boy aged ten had a swelling of the right side of the face in May, 1894, which gradually subsided by August. In July his breathing became very noisy, and in November he suffered from increasing dyspnoea. He had no other discomfort, but had wasted considerably. When seen on November 6th, 1894, there was no glandular enlargement. On depressing the posterior part of the tongue a red swelling was seen occupying the whole of the lower half of the pharynx. It consisted of two lobes. The first occupied the space between the epiglottis and the posterior wall, and extended over the left ary-epiglottic fold. By laryngoscopy the other lobe could be seen pressing downwards into the pharynx. During respiration, which was very difficult, the pale but otherwise normal epiglottis rose to a slight extent from off the tumour. The latter, which had a smooth surface, was of a dull red colour, immobile, soft, and readily bleeding on palpation. Considering the short duration of dysphagia, as also of the relatively slight interference with respiration, its deep origin could be eliminated, and it seemed pretty certain that it arose from the right margin of the epiglottis or from the ary-epiglottic fold. The writer took it for a sarcoma. On the 12th November an operation was performed with preliminary tracheotomy and insertion of Trendelenburg's canula. Under anaesthesia the palpation was much easier. The tumour arose from the right ary-epiglottic fold with a narrow base. An attempt to pass a snare round it was unsuccessful. By means of a forceps a portion of it could be removed, and a hook came through the tissue. On account of the dangerously severe hæmorrhage the author avoided removal of the growth by bits and determined to practise subhyoid pharyngotomy. This being done, a galvano-caustic snare was passed round the tumour, which was thereby removed. The cautery was also applied to the site of the

tumour and the wound was brought together by stitches at different depths. Trendelenburg's canula was removed and an ordinary one inserted. Nutrition was kept up by means of a stomach-tube introduced through the nose. The growth was found to be four centimètres long, three wide, and two and a half thick, and on histological examination was found to be a carcinoma.

On the 15th November the tracheal canula was removed, and the patient was able to drink milk. There was considerable reactionary swelling in the neck, and on the anterior surface of the epiglottis there was a white exudation. The patient was dismissed on the 22nd November. He was again seen on the 10th December, when he had a swelling of the face and again breathed audibly. There was found between the root of the tongue and the epiglottis a swelling and two white spots (perhaps caused by the stitches of the middle stage); there was, further, upon the left ary-epiglottic fold a small swelling, which, four days later, increased to the size of a hazel nut.

On the 8th January it was again smaller. The epiglottis was still thickened, and the space between it and the tongue still filled up. Again, on the 10th February, the patient was seen, and the swelling on the left ary-epiglottic fold had disappeared, both folds were irregular and thickened, and the swelling of the epiglottis had gone down.

On the 22nd April the patient appeared well and took his food satisfactorily; he had no discomfort in the throat; he only snored when lying on the left side. The epiglottis was normal, drawn somewhat to the left and backwards. Nothing abnormal could be detected at the site of the growth. On the left side there can be seen some folds where the epiglottis and the rest of the mucous membrane had been stitched after pharyngotomy. The swellings, which at first were taken to be a rapid recurrence, and which disappeared so astonishingly, were probably due to the attempts of the stitches to find exit.

In view of the absence of recurrence for so many months, doubt was felt as to the correctness of the anatomical diagnosis; and Prof. Spronck, of Utrecht, was good enough to examine the growth for the second time, and to report it as being a sarcoma with alveolar formation. It gave the impression as though the alveoli were formed of endothelial cells. Without doubt cells could be met with in the growth which surrounded the vessels. The growth might be considered as an endothelioma, or even a perithelial sarcoma. He was not without anxiety as to the prognosis, but he thought that it tended to be favourable. In literature similar cases had been described in children in which no recurrence had occurred.

Dr. A. C. H. MOLL (Arnheim). *Demonstration of Two Cases of Tuberculosis of the Larynx.*

The first came under treatment in the previous year. On laryngoscopic examination there was found great swelling of the epiglottis, infiltration of the right ary-epiglottic fold, growths in the interarytenoid fold, infiltration of the ventricular bands, especially the right one; the left vocal cord, as far as could be seen, was normal. Rhonchi were heard at

the apices of the lungs, and the sputa contained bacilli. The treatment began with splitting of the epiglottis and cauterization with pure lactic acid, while creosote was administered internally. The difficulty in swallowing diminished considerably, but the incision did not heal. From both sides on several occasions infiltrated portions were removed.

In winter the patient was taken into the hospital, and the initial improvement again disappeared. His pyrexia was between 38° and 39° C., and respiration became embarrassed. In February tracheotomy was performed, and painting with lactic acid resumed. The general condition has improved, dysphagia and expectoration diminished, the cough is less, the patient feels much stronger, and believes he is going to recover. Unfortunately, of late the general condition has become worse. When the patient was before the Medical Society a few weeks ago all those who were present were persuaded of the favourable general condition. If the patient recovers from this retrogression, and endolaryngeal treatment proves itself insufficient, I think of carrying out laryngotomy, or perhaps laryngectomy.

The second patient, aged forty-four, when he came four years ago under treatment was emaciated, with severe dysphagia, violent cough, hoarseness, and dyspnoea. He traced his cough to influenza, with subsequent pleurisy, two years before. He has been deaf for a year, and had difficulty in swallowing for half a year. In the larynx there can be seen distinct swelling of the epiglottic folds. The epiglottis was so pendulous that the larynx could not be seen. The apices of the lungs were affected. Tracheotomy was performed, and the temperature, which at first was high, sank within fourteen days to normal. The whole time the general condition has improved; he looks better, coughs less, has less expectoration, and has lost his aphonia. The difficulty in breathing has not quite disappeared, as there is still distinct swelling of the left ventricular band, in consequence of which the left vocal cord cannot be seen. The right one is healthy. In this case, therefore, tracheotomy has not only counteracted the danger of asphyxia, but has exercised an excellent influence on the laryngeal process, just as Moritz Schmidt has described in such cases. In my opinion, if the pulmonary disease is not too extensive, it need not contra-indicate tracheotomy.

Dr. KRÖL was of opinion that the laryngeal disease was undoubtedly secondary, and considered extirpation of the larynx as contra-indicated.

Dr. MOLL quite agreed that the laryngeal tuberculosis was secondary, but compared it to a tuberculosis of joints or bones, when the lungs are not infrequently affected without this being considered a reason for abstaining from surgical treatment of the local tuberculosis. The larynx should be dealt with just like a diseased joint. The diseased process in the lung would only be a contra-indication when it was such as to prevent the patient from standing the operation.

Dr. PEL regarded this patient from the general clinical standpoint, and had no doubt that a genuine tuberculous dyscrasia was present, and thought, therefore, that the patient could not stand a severe surgical operation. Comparison with *surgical* tuberculosis did not hold good in this case, because the general dyscrasia was in the foreground.

Dr. MOLL : When one compares the previous melancholy condition of the patient with that which followed treatment the favourable effect of this was unmistakable. This proves that the lung affection does not exclude local interference, but it happens by chance that for the last few days the patient is not as well as he has been.

Dr. BRONDGEEST was of the opinion that one must always look at the frightful pain of laryngeal tuberculosis from a surgical point of view, and that it should be our duty to adopt energetic measures.

Dr. BURGER thought that from a surgical point of view laryngectomy was by no means indicated in this case. Laryngectomy was, in his opinion, only indicated when complete healing is to be expected, and he agreed with Dr. Krol in regarding extensive affection of the lungs as an absolute contra-indication.

Dr. MOLL for the moment did not think of carrying out this operation but he thought rather of partial laryngectomy.

Dr. C. REINHARDT. *Two Patients Treated according to the Panse-Körner Method.*

These were cases of chronic suppuration of the middle ear, with caries and high perforation of the membrane of Shrapnel, along with protruding granulations.

Numerous methods of treatment having failed, he had determined to lay open the cavities of the middle ear. The skin incision went down to the bone and was parallel to the insertion of the auricle, extending for a finger's breadth in front of it at the upper end, so that the concha could be entirely turned out to the front, especially after the postero-superior membranous wall of the meatus was raised with a fine raspatory, so that the whole meatus could be everted like a funnel. He always left the anterior and lower membranous walls of the meatus in position, in order to avoid the occurrence of artificial stenosis in the meatus later on. When the osseous meatus is thus exposed there can be seen by direct light the membrane, the perforation, the granulations, and the remains of the hammer. The posterior osseous wall of the meatus is chipped away from without inwards right into the antrum, so that (particularly during the removal of the most medially situated part) great care is required to avoid injury of the inner wall of the tympanum, the facial nerve, or the semicircular canals, by means of a right-angled bent silver probe or Stacke's protector. The chief point is, however, to have good illumination of the field of operation, which at this depth is apt to be very much in the dark. In this way the osseous lateral wall of the attic is removed, and the remains of the drum, membrane, etc., can now be removed. The meatus, tympanum, attic, aditus, antrum and the upper cells of the mastoid process are thrown into one single cavity. In the cases at present described there were only a few cells remaining in the mastoid process, and they were filled with granulations.

The next point is the preparation of the flaps as recommended by Panse and Körner. The after-treatment is carried out through the external meatus, and is much facilitated by the widening of the orifice. He has already operated upon twelve cases by the above method. He

attaches great importance to the selection of cases. He excludes cholesteatoma on account of the certainty of recurrence. Tuberculous caries is also unsuitable for this operation. All depends upon what is found in the course of the proceeding. If there is found to be only a circumscribed caries of the ossicles or of the pars ossea, primary closure ought to be carried out. In case of caries of the inner wall of the tympanum, much caution is required. In one case the parts had to be reopened, because the caries of the inner wall extended under a so-called pseudo-epidermic coat, and the disease could not be satisfactorily reached through the meatus.

The advantages of the Panse-Körner flap are that the after-treatment is shorter, as the epidermization of the cavity can take place from the four borders of the wound; and, secondly, that the cosmetic effect is extremely good.

Dr. A. C. H. MOLL. *Two Patients operated on according to Zaufal's Method.*

The difference between this method and the previous one depends on the plastic methods employed in regard to the flaps. In many cases the skin ought not to be employed, especially when it has been already undermined. Preservation of the skin makes the operation more difficult, especially in the narrow meatuses of children. Further, it is in many cases necessary to reach the deeper parts easily, in order later on to scrape away or cauterize the granulations. There is always a very strong tendency to contraction. It is, no doubt, a very beautiful result to get the wound to heal in ten days, but this can only be exceptionally accomplished. If, as Zaufal has described, and as Dr. Moll has done, the membranous part of the upper and posterior wall of the meatus is separated, there is at once a large amount of space, the anterior wall remains intact, and the epidermization goes on quite perfectly. Dr. Moll always commences by removing the malleus through the intact meatus, so that this delicate operation may not be interfered with by hæmorrhage. Thereafter he makes an extensive incision on the mastoid, and at right angles to that a second one in a forward direction, and, if necessary, even a third backwards, so that the whole inclined plane of the meatus may be freely exposed. After this an india-rubber tube is inserted into the meatus, and upon it, from behind, the cuticular wall is incised; then a knife is introduced through the wound, and at the upper and posterior wall two horizontal parallel incisions are made. This piece is then removed by means of a raspator. The antrum is then opened at the typical spot, and from the opened antrum a probe is passed into the aditus. In this way the antrum is opened from without inwards. Lastly, the lateral wall of the attic and the whole superior wall of the meatus are chiselled away so that the incus is exposed, the osseous wall of the posterior section of the meatus is removed, with preservation of the part in which the facial nerve lies. The cavity is cleared out, irrigated with sterilized water, and then plugged with iodoform gauze—partly from the wound, partly from the meatus.

The first patient was a girl, operated on in the past year, who had suffered from severe headache and chronic otorrhœa. The cavity has healed up. The headache, which gradually diminished after the opera-

tion, returned again when the patient resumed her work, but was less than before.

The second patient was a child, whose meatus was filled with pus, and behind the ear there was a swelling, pressure upon which caused a copious outflow of pus from the meatus. The meatus was undermined and perforated, making a very poor skin for plastic operations. There was only a little remnant of the membrane remaining; the ossicles were present, but the malleus was carious and imperfect. The wounds have now healed up, and from the normal meatal orifice it can be seen that the postero-superior wall of the meatus is absent, and the interior of the mastoid cells and the antrum and the attic, all covered with epidermis, well in view. The hearing power is one mètre for whisper, and two mètres for ordinary conversation.

Dr. REINHARDT could not understand what benefit could be derived from throwing away epidermis.

Dr. BURGER asked how Dr. Reinhardt carried out the after-treatment in the larger number of cases in which he did not close the wound from the first.

Dr. REINHARDT replied that he kept the wound open until healthy granulations showed themselves in the depths of it; only then he allowed the retro-auricular opening to close by granulation. In cases of cholesteatoma he made a persistent retro-auricular opening by means of flaps of skin derived from the scalp, which he considered the best means in view of the certainty of recurrence. A good deal had been said about the cosmetic aspect of the persistent opening. This opening was especially important in people who did not keep under regular observation.

Dr. V. H. VAN ANROOY. *A Case of Recovery from Primary Laryngeal Tuberculosis.*

The patient, aged thirty-seven, had from the end of 1893, on and off, difficulty with his voice, and on account of increasing hoarseness he consulted Dr. van Anrooy in February, 1894. There was found a diffuse redness of the vocal cords, and a small ulcer upon the slightly swollen right ventricular band immediately in front of the arytenoid. The patient complained of nothing except hoarseness. His general condition was good. He had never had any serious illness, very little cough, and no expectoration. The lungs on repeated examination were found sound. In the sputum there were no bacilli, and there was no evidence of previous or present lues. Treatment with iodide of potassium produced no effect. Owing to other circumstances the patient was unable to place himself under local treatment until May, and during the interval the laryngeal disease had progressed; the ulceration had extended on to the swollen right arytenoid region and forward upon the vocal cord. At this time he had difficulty in swallowing and occasional pain in the right ear. The writer then removed with the curette the granulating edges of the ulcer on the right vocal cord, and sent the fragment to Prof. Siegenbeck van Henkelom, of Leyden, who returned a diagnosis of unquestionable tuberculous disease. Further treatment consisted of curetting, with subsequent rubbing in of pure lactic acid. The ulcers have completely cicatrized, and the only remaining trace is an unevenness of the surface

of the right ventricular band. There is no trace of inflammation or infiltration. The voice, which in May, 1894, was very weak, is quite clear; the movement of the vocal cords normal. The patient is unable to economize the use of his voice, therefore healing has been rather slow--only complete at the end of October.

Dr. SCHLEICHER. *Demonstration of a Galvano-Cautery Handle with a Rheostat.*

This instrument has attached to its handle a rheostat, on which there is a metal slide; and as the loop of the galvano-cautery is shortened in the process of operation more and more of the resistance of the rheostat comes into the circuit, so that the current is kept the same throughout, and a tendency to the burning through of the wire is avoided. This appliance is intended to do away with the necessity for having an assistant at hand to diminish the strength of the current as ordinarily employed. He recommends strongly the snare devised by Chardin, in which the wire is not carried through the usual long tubes.

Dr. ZWAARDEMAKER congratulated the speaker upon the excellence and simplicity of his rheostat. *Dundas Grant (Trans. and Abs.).*

FIRST SPANISH CONGRESS of OTO-RHINO-LARYNGOLOGY.

Madrid, October 18th, 1896.

THE organizing commission of this, the first Spanish Congress, is composed of Drs. Uruñuela, Cisneros, Gonzalez Alvarez, Compaired, Forns y Rueda, of Madrid, and Dr. Verdos (Barcelona), Dr. Sota y Lastra (Seville), Dr. Moresco (Cadiz), Dr. Casanova (Valencia), Dr. Arrese (Bilbao), Dr. Fundarena (Tolosa), Dr. Aguirre (Pamplona), Dr. Royo Galindo (Saragossa), and Dr. Santiuste (Santander). The following officers were elected:—President, Dr. Uruñuela; Vice-President, Dr. Gonzalez Alvarez; Secretary-General, Dr. Compaired; Second Secretary, Dr. Forns; Treasurer, Dr. Rueda.

Those proposing to visit the Congress will have special rates granted by the railway companies, and by certain hotels in Madrid, and arrangements will be made for the inspection of museums, official establishments, etc.

Three weeks before the Congress a complete list will be published of communications to be made.

The Congress will meet on October 18, in Madrid.

The subscription will be 25 pesetas.

Administrative matters will be under the direction of Drs. Gonzalez Alvarez and Rueda, the social arrangements under that of Drs. Cisneros and Compaired, and the arrangements with public bodies under that of Drs. Uruñuela and Forns. Further details as to this Congress will be published later.

R. N. Wolfenden (Trans.).

ABSTRACTS.

DIPHTHERIA, &C.

Abel (Greifswald).—*Experiment on the Influence of Winter on Diphtheria Bacillus*. "Centrbl. für Bacteriologie," 1895, page 345.

THE bacilli retain their virulence during the whole winter. Serum cultures were also efficient after 373 days. The cold has no influence on the cultures. *Michael*.

Adolph (Frankfurt-a-M.).—*Hundred Cases of Diphtheria treated by Behring's Heilserum*. "Deutsche Med. Woch.," 1896, No. 3.

OF one hundred cases, 20 died. Of these cases, 27 were tracheotomized, with 12 deaths. *Michael*.

Haegler.—*Remarks on Diagnosis of Diphtheria*. "Courszbl. für Schweizer Aerzt.," 1896, No. 2.

THE author prefers Loeffler's glycerinagar to all other methods of cultivating the bacilli, *Michael*.

Hewlett, R. T., and Nolan, Harold.—*Results of the Bacteriological Examination of One Thousand Suspected Cases of Diphtheria*. "Brit. Med. Journ.," Feb. 1, 1896.

THE objects of examination were one thousand consecutive specimens sent to the British Institute of Preventive Medicine for primary report. In five hundred and eighty-seven the Klebs-Loeffler bacillus was found; in four instances the verdict was doubtful. In a series of three hundred and fifty-three containing the bacilli, the latter were present in pure culture in two hundred and sixteen instances. The bacilli were "commonly" to be found two or three weeks after the attack, but in many cases considerably longer—notably in one instance, in which the bacilli were proved, by inoculation experiment, to be virulent twenty-three weeks after convalescence. Virulent bacilli—which, presumably, were accountable for a school epidemic—were found in the throat of a boy six months subsequent to an undiagnosed attack. *Ernest Waggett*.

Lemoine, A.—*Contribution to the Bacteriological Study of Non-Diphtheritic Anginas*. "Annales de l'Institut Pasteur," Vol. IX., No. 12.

THE author has employed a special technique. Before taking the culture he washes the throat with sterilized water, dries with sterilized cotton, and cauterizes superficially with the tip of a pipette. From the middle of the eschar, and, subsequently, from the centre of the tonsils, he takes the products to be cultivated. This proceeding gives a notable difference in results to the simple collection of liquids at the surface of the tonsils.

The author has examined one hundred and sixty-eight cases of anginas.

1. One hundred and twelve scarlatinas; seventy-four pseudo-membranous, thirty-eight erythematous.
2. Six in measles.
3. Three in mumps.
4. Twenty-nine cases of non-diphtheritic pseudo-membranous anginas.

5. Fourteen simple anginas, without pseudo-membranes.

6. Three cases of chronic amygdalitis, one with subsequent suppuration.

In these three last cases they found bacillus coli, or bacillus similar to bacillus coli.

In the one hundred and sixty-eight cases the streptococcus has been constantly found, most frequently associated with other microbes when the cultures were made with the products of the surface of the tonsils. In the cases done with the liquid aspirated from the interior of the tonsils (one hundred and forty-two cases) streptococcus was associated with staphylococcus eleven times; with bacillus coli five times. In the cultures from superficial parts (twenty-three cases) streptococcus was alone twelve times; associated with staphylococcus, six times; with bacillus coli, three times; with pneumococcus and bacillus coli, twice.

Anginas in general are a manifestation of streptococcal disease, like erysipelas, puerperal fever, etc.; and, in the occurrence of grave forms, Rogers' and Marmorek's serum is indicated.

A. Cartaz.

Martin, Louis.—*Intubation of the Larynx; Indications, Technique, etc.* "Bull. Méd.," 1895.

SOME illustrations make the description easy, clear, and interesting. The author insists on the care of the patient after operation and washings of the mouth and fauces. The tubage must be employed by preference to tracheotomy, especially since the employment of serumtherapy.

In five hundred and twenty-six cases of diphtheria the intubation has been necessary seventy-two times, with only seventy-six deaths. Three times tracheotomy was necessary, the tubage being impossible.

Martin relates two cases of severe diphtheria with broncho-pneumonia which were cured by simultaneous injections of Roux's and Marmorek's serum.

A. Cartaz.

Martin, Sidney, and Smith, H. R.—*Cases of Diphtheria treated with Antitoxin at University College Hospital.* "Brit. Med. Journ.," Jan. 25, 1896.

AN important communication, containing tables of comparative statistics too long for full review here. The figures show a very marked decrease of mortality, under the antitoxin treatment, in laryngeal cases, and more particularly among those which came under treatment early in the disease. Occurrence of rash, persistence of bacilli, cause of death, onset of paralysis, and other similar points of interest are fully dealt with.

Ernest Waggett.

North, Gaston.—*Micrococcus Brison. A Contribution to the Study of Diphtheria.* "Boston Med. and Surg. Journ.," Jan. 23, 1896.

GIVES the characteristics of this organism, and points out that when associated with the Klebs-Loeffler bacillus it invariably points to a favourable termination of the case; and raises the question as to whether it may possibly act like the bacillus coli with Eberth's bacillus in inhibiting the virulence.

StGeorge Reid.

Pope, E. M.—*Feeding under Chloroform in Diphtheritic Paralysis.* "Brit. Med. Journ.," June 15, 1895.

THE case of a patient, greatly emaciated, with paralysis of diaphragm and regurgitating all food. Fed with the tube under chloroform with good result.

Ernest Waggett.

Schauz (Dresden).—*Etiology of Diphtheria.*

THE author believes that Loeffler's bacillus does not alone produce diphtheria, but that under certain (*sic*) circumstances this bacillus becomes virulent and pathogenic.

Michael.

Schlesinger (Berlin).—*Leucocytosis in Diphtheria*. "Archiv. für Kinderheilk.," Bd. 19, Heft 5, 6.

IN cases of diphtheria the author found an increase of the leucocytes; in favourable cases the hyper-leucocytosis diminishes; in grave cases it remains till death. By application of heilserum the author could observe a decrease of the hyper-leucocytosis. Details and tables illustrate this thesis. *Michael.*

Stokes, W. R.—*The Bacteriological Examination of Nine Autopsies on Cases of Diphtheria treated with Antitoxin*. "Boston Med. and Surg. Journ.," Dec. 12, 1895.

THE author deals with the question of the general infection of the system, in some cases of diphtheria, with various pathogenic organisms, and the advisability of dividing cases into two forms: cases of simple infection by the diphtheria bacillus, and cases of mixed infection with one or more pathogenic cocci. He refers to numerous instances where pyogenic bacteria were found in various internal organs—heart, spleen, kidneys, etc.—after death, and suggests the possibility of the failure of antitoxin in some cases being due to this form of poly-infection. He insists on the necessity of the early administration of antitoxin in order to lessen the danger of secondary infection, and to render the system more capable of overcoming the effects of the various complicating bacteria present in the body.

St George Reid.

Sudeck (Hamburg).—*On the Existence of Diphtheroid Bacilli in the Air*. Festschrift des aerztlichen Vereins in Hamburg, 1896.

By careful examination the author found in the air of the Hamburg Hospital, and not only in the diphtheria wards, bacilli similar to those of diphtheria. Inoculation in guinea-pigs showed that some of the cultures were virulent; in other cases virulence could not be found. *Michael.*

Wieland.—*Serum Treatment of Diphtheria in the Basler Children's Hospital*. Medizin. Gesellschaft in Basel, Meeting, 12 Sept., 1895.

OF 109 cases, 25 per cent. died; of operation cases, 26·9 per cent. died, 59 per cent. before application of serum. The author recommends the treatment.

Michael.

NOSE AND NASO-PHARYNX.

Ballenger, W. L.—*Electrolysis as a Treatment for Deviations, Spurs, and Ridges of the Nasal Septum*. "Journ. Am. Med. Assoc.," Jan. 11, 1896.

AFTER a detailed statement of principles involved in electrolysis, the writer gives a tabular report of twenty-one cases upon which he operated by this method. His conclusions are: (a) The results are favourable in most cases, but the method is neither so simple nor so sure as the usual surgical means. (b) It should be limited to those cases in which it is impossible to carry out surgical treatment, either on account of the disinclination or disability of the patient. (c) Electrolysis requires an experienced specialist to carry it out. (d) Cartilage yields more readily than bone. (e) Osteoma are more easily removed than normal bone. (f) Only growths of small size are successfully removed by electrolysis. (g) Perforation and sloughing result from the use of too powerful or too prolonged current. (h) Ten to twenty-seven milliamperes of current were used for a time, varying from twelve

to twenty-seven minutes. One case was followed by prolonged suppuration without perforation. *Oscar Dodd.*

Farber, J. H.—*Ethmoiditis Suppurativa Acuta et Chronica. Cause, Diagnosis, and Treatment, with Anatomy of Ethmoid.* "Annals Ophth. and Otol.," Jan., 1896.

THE author, after a brief anatomical description of acute ethmoiditis, proceeds to describe a concave crust, formed on the middle turbinate and discharged every second day, which he considered pathognomonic of the chronic variety. He opens up the cells with a dental drill, which is described as almost painless. *R. Lake.*

Hall, De Havilland.—*The Dangers of Cocaine.* "Brit. Med. Journ.," Feb. 8, 1896.

THE author recommends the addition of ten per cent. of resorcin to the twenty per cent. solution of hydrochlorate of cocaine. The former, while increasing the anæsthetic, diminishes the toxic effects of the cocaine. The application by spray is a source of danger. *Ernest Waggett.*

Herzfeld and Hermann (Berlin).—*A New Capsule Bacillus found in the Secretion of the Nose and the Antrum of Highmore.* "Hygienische Rundschau," 1895, No. 14.

THE authors found in a case of acute catarrh a new bacillus with orange-coloured cultures. *Michael.*

Keegan, D. F.—*On Rhinoplasty in India.* "Brit. Med. Journ.," Sept. 28, 1895.

DEMONSTRATION of photographs at section of surgery, British Medical Association Meeting, showing results of the author's method. In order to avoid contraction of the new nose, skin flaps are dissected off the nasal bones and turned down, the epidermal surface inwards, the raw surface being covered by a large flap from the forehead. Details in "Treves' Surgery." *Ernest Waggett.*

Laurens, G.—*Nasal Diseases and Reflex Ocular Symptoms.* "Presse Méd.," 22 Jan., 1896.

TWO cases of serious ocular troubles secondary to nasal diseases. In the first, a man, thirty-one years, had had for a long time nasal obstructions on the right side, caused by synechiæ between the inferior turbinated bone and the septum, with hypertrophy of mucous membrane. Intranasal operation gave sudden and permanent relief to a blepharospasm of some months' duration. In the second case, a girl, six years old, with adenoids and left convergent strabismus, extirpation of the adenoids was practised, and some days later the strabismus disappeared.

A. Cartaz.

Leseur.—*Contributions to the study of Hay Fever.* Thèse de Paris, 1895.

ACCEPTED opinions on the nature of hay fever are reviewed, the symptoms enumerated, and the author concludes, after Joal, Letlaive, and others, that hay fever is a reflex nasal necrosis, supervening in arthritic or neurotic patients, increased by stimulation of the nasal mucous membrane. Dust, pollen, odour of flowers, are only occasional causes of the crisis. *A. Cartaz.*

Loeb, H. W.—*The Value of Sharp Curettes in the Removal of Septal Projections.* "Journ. Am. Med. Assoc.," Jan. 4th, 1896.

WHILE considering the saw usually the best instrument with which to remove septal projections, yet there are many for which it is not applicable. These are such

as are too far from the anterior nares, either posteriorly or superiorly, or present too obtuse an angle, or are situated behind a deflection. For such cases the currettes he has devised are specially adapted. They are very much like the ordinary uterine currettes, but are highly tempered and well sharpened. They may be either flat or rounding at the end.

Oscar Dodd.

Mackenzie, A. Hunter.—*The Treatment of Ozæna. A Preliminary Note.* "Brit. Med. Journ.," April 27, 1895.

RECORD of a case remaining free from recurrence four years after cessation of treatment lasting a few months. Recommendation of curettement.

Ernest Waggett.

Pender (Hamburg).—*Congenital Diaphragm of a Choan and Asymmetry of the Face.* Festschrift des aerztlichen Vereins in Hamburg, 1896.

IN a girl, sixteen years old, with obstruction of the left nostril, the author found a diaphragm excluding the posterior opening of the choan. The probe showed that it was an osseous diaphragm. By transillumination it was found that the membrane was one and a half to two millimètres thick. The patient could not smell on the left side. The deformity was complicated by an asymmetry of the face, observed also in other cases of this anomaly.

Michael.

Price-Brown.—*Diagnosis and Treatment of Suppuration of the Antrum, with Cases.* "Annals Ophth. and Otol.," Jan., 1896.

THE author gives as his experience that transillumination alone is not sufficient evidence of antral disease, but that if pus in the region of the ostium is also present, it is practically pathognomonic of disease in that cavity. He places the various methods of treatment impartially before his readers, and concludes with the detailed narration of two cases treated through the canine fossa, one through the alveolus, and one through the ostium; three are cured, and one through the canine fossa nearly so. He uses a weak solution of resorcin for irrigation in most instances.

R. Lake.

Strangways, W. F.—*Hay Fever; a Successful Treatment founded on a New Theory.* "Annals Ophth. and Otol.," Jan., 1896.

AFTER showing how untenable the theory of direct irritation by pollen on sensitive areas is, the writer proceeds to explain his views—which briefly are that the cause is found in a toxin generated from pollen by a fermentative process in an alkaline solution. This toxin produces a vaso-motor paresis with disordered secretions, which by irritation cause paroxysms of sneezing.

Neutral and alkaline solutions but little affected pollen, whilst very dilute acid solutions caused a rapid formation of a greyish exudation. This the writer took to show that alkaline solutions assisted to form this toxin, and that acids prevented it by causing other changes. His treatment consists in the use of a douche, using a solution containing acetic acid 2 min., salt 4 grs., resorcin 1½ grs., water 1 oz. The resorcin is not always needed. Internally he administers hydrochloric acid, one to two drachms daily. In many instances the douche is sufficient alone.

R. Lake.

Thost (Hamburg).—*On the Operations of Adenoid Vegetations.* Festschrift des aerztlichen Vereins in Hamburg, 1896.

THE author recommends Gottstein's ring-knife, and performs the operation in chloroform narcosis. In 1500 cases, four cases he observed severe asphyxia, and in twelve cases severe hæmorrhages.

Michael.

Young, Dudley.—*A Shielded Chromic Acid Applicator.* "Boston Med. and Surg. Journ.," Jan. 23, 1896.

CONSISTS of a flattened probe roughened at its extremity for about one centimètre, and encased in an elliptiform tube which is attached to a handle. The probe is controlled by a small button, which is made to slide to and fro by the middle finger.

StGeorge Reid.

Zarniko.—*Kakosmia Subjectiva.* Festschrift des aerztlichen Vereins in Hamburg, 1896.

In some cases of kakosmia subjectiva it was not an hysterical symptom, but caused by empyema of the accessory cavities.

Michael.

MOUTH, PHARYNX, &C.

Akerblom.—*Acute Inflammation of the Ductus Rivini and the Sub-Lingual Gland.* "Monats. für Ohrenheilk.," 1895, No. 3.

A GIRL, eleven years old, ill with fever, had difficulty in speaking and swallowing. The right side of the neck was swollen. On both sides of the tongue were prominent oval tumours, from which a clear fluid could be pressed. The fluid gave rhodankalum reaction. Kalichloricum and internal use of antifebrin cured the condition.

Michael.

Boltz (Hamburg).—*Case of Round-Celled Sarcoma of Soft Palate Cured.* Festschrift des aerztlichen Vereins in Hamburg, 1896.

A PATIENT nineteen years old, in very bad general health, had an oval perforating ulcer of the soft palate. Tuberculosis could be excluded, also syphilis, by the inefficacy of an antisyphilitic treatment. A piece of the tumour was now extirpated for microscopical examination, and the result was that it was a round-celled sarcoma. The patient was treated by subcutaneous injections of a one per cent. solution of natron arsenicosum. Six weeks later the ulcer was cicatrized. The general health good. His weight increased 10½ kilo.

Michael.

Fullerton, Robert.—*An Unusual Condition of the Pillars of the Fauces, probably Congenital.* "Brit. Med. Journ.," May 4, 1895.

DESCRIPTION, with figure, of a case with history negative of syphilis, in which a large opening was present external to either anterior pillar, together with destruction of mucous membrane over certain tracts of the pharynx.

Ernest Waggett.

Jamieson, W. Allan.—*On Some Superficial Affections of the Red Portions of the Lips.* "Brit. Med. Journ.," Dec. 7, 1895.

THE paper, which deals with the appearances of and treatment for herpes, fissure, eczema, warts, hair, etc., contains a detailed account, with macro- and micro-scopic drawings, of a case characterized pathologically by chronic œdema, round-cell infiltration, and proliferation of Malpighian layer of epidermis of the whole of the lower lip, suggestive of epithelioma.

Ernest Waggett.

Kendall, H. W.—*A Safe and Sure Method of Reducing Enlarged Tonsils.* "Journ. Am. Med. Assoc.," Jan. 4th, 1896.

THE writer uses capillary glass tubes, which are heated and drawn out to a fine point, the shaft of the drawn part being two inches long and one sixty-fourth of an

inch in calibre, and the point is broken off. This tube is dipped in fuming hydrochloric acid and pushed into the substance of the tonsil, three in each tonsil twice a week. It is painless, and produces no inflammation or swelling. Five or six applications are sufficient to reduce moderately enlarged glands.

Oscar Dodd.

Onodi (Pest).—*Rhino-Laryngological Communications*. "Monats. für Ohrenheilk.," 1895, No. 3.

1. *Fibro-Sarcoma of the Base of the Tongue*. Tumour the size of a bean in a child seventeen years old. Extirpation was not allowed.

2. *Lipoma of a Tonsil*. A broad yellowish tumour, situated on the tonsil of a child, was removed by the cold snare. The microscopic examination showed that it was a lipoma.

3. *Case of Argyria*. Characteristic colour of the mucous membrane in a syphilitic patient, sixty-two years old, locally treated for some years with nitrate of silver.

4. *Sarcoma of the Nasal Fossa*. Died from recurrence.

5. *Recurrent Paralysis from an Aneurism of the Aorta*.

6. *Isolated Paralysis of the Left Crico-Arytenoideus Lateralis following Influenza*. Michael.

Ravogli, A.—*Ulcerative Syphilide of the Pharynx*. "Journ. Am. Med. Assoc.," Jan. 18th, 1896.

THE author reports four cases out of a large number of other cases, and considers it a rather rare affection. It is a late secondary manifestation occurring two or three years after the primary infection.

Oscar Dodd.

Schramm (Lemberg).—*Case of Œsophagotomy in a One-Year-Old Child*. "Wien. Med. Woch.," 1895, No. 50.

IN a one-year-old child the author removed by œsophagotomy a button of porcelain which he could not remove in any other way, and which obstructed the whole lumen of the œsophagus, so that fluids only could get into the stomach through the holes in the button. The child was cured. It is the youngest patient operated on. Of eleven little children œsophagotomized by other authors for foreign bodies, three have died.

Michael.

Stewart, J. Purvis.—*Tuberculosis of the Tonsil*. "Brit. Med. Journ.," May 4, 1895.

DESCRIPTION of microscopic appearance, with figures, of a tonsil apparently merely hypertrophied, but containing giant cell systems, and associated with tubercular cervical glands.

Ernest Waggett.

Vallas.—*Pharyngotomy Transhyoidea*. "Gazette des Hôpitaux," Jan. 17, 1896.

THE technique of the operation is indicated: Vertical incision in the line down to the hyoid bone. Sections of that bone and separation in the middle line of the muscles inserted on the upper or lower borders of that bone. The thyroid-hyo membrane, then well in sight, is incised.

Vallas believes, and relates two cases as proof, that the extirpation of tumours of tongue and epiglottis is safest by this proceeding.

A. Cartaz.

LARYNX. TRACHEA, &C.

Booth, J. Mackenzie. — *A Case of Intra-Laryngeal Tumour Removed by Thyrotomy.* "Brit. Med. Journ.," April 27, 1895.

REMOVAL of a large fibrous polypus from the anterior commissure. An incision through one ala was made at right angles to the usual vertical incision. Preliminary tracheotomy considered unnecessary.

Ernest Waggett.

Davis, A. M. — *Laryngeal Syphilis, with report of a Fatal Case; Autopsy Notes.* "Med. News," New York, Jan. 18, 1896.

REFERS to the statistics of this form of disease and to its varied lesions. The case mentioned is that of a woman aged forty-six, who suffered from dyspnoea after any exertion. There was a rupial sore on the left frontal prominence, and mucous patches over the tongue and mouth. One month after admission the patient was seized with acute dyspnoea, became cyanosed and unconscious, death resulting in a few minutes. At the autopsy the circumvallate papillæ of the tongue were found enormously distended; epiglottis and pharynx normal; the thyroid cartilage on the left side was necrosed, the necrotic area extending across the median line to the right, and being surrounded by a sloughing ulcer which filled up the entire space below the left cord; tissues below the right and left cord swollen; mucous membrane inflamed. Fatty infiltration of voluntary muscles, heart, and liver.

St George Reid.

Marfan and Hallé. — *Chicken-Pox of the Larynx.* "Revue Mensuelle des Mal. de l'Enfance," Vol. XIV., Jan., 1896.

THE authors relate two cases of chicken-pox eruption in the larynx. In the two young patients—one three years and the other nine months—the primary appearances of disease were those of diphtheria. But the cultures from the throat were negative. Laryngeal stenosis was so intense in the first that tracheotomy had to be performed. The characteristic eruption appeared at this period. In the second case tracheotomy was not necessary, but the child died of bronchopneumonia. In the larynx, ulceration was present on the vocal band.

Merklen. — *Rapid Cure of Laryngeal Ictus.* "Soc. Méd. des Hôpitaux," Dec. 20, 1895.

Two cases of laryngeal ictus; for both, the administration of two grammes daily of antipyrin and insufflation of the same drug (one per cent.) gave immediate relief.

A. Cartaz.

Pfeffermann-Bors. — *An Instrument for Forcible Dilatation of the Larynx in Cases of Chronic Stenosis.* K. K. Gesellschaft der Bergen in Wien. Meeting, Jan. 10, 1896.

THE author uses cylindric tubes, which are not so painful for the patients as other instruments for dilatation.

WEINLSCHUER has applied the methods in two cases with good results. He usually uses, in cases of stenosis, a drain induced by a guide. The method only can be applied in tracheotomized cases.

Michael.

Poore, G. V. (London). — *Chronic Lead Poisoning (Unilateral Laryngeal Paralysis).* "Clin. Journ.," Jan. 22, 1896.

IN this case there was marked immobility of the left vocal cord, which was not adducted to the middle line during phonation.

Dundas Grant.

Straight, H. S.—*Fishbone in the Right Pyriform Space.* "Annals Ophth. and Otol.," Jan., 1896.

REPORT of a case in which a woman swallowed a fishbone, which was buried one inch and three-quarters in her right pyriform fossa. The reporter failed to find it until after he had pressed on the side of the larynx. Pain on pressure and on swallowing, with discharge of excess of mucus from the mouth and a little blood at the time of impact, were the only symptoms. *R. Lake.*

THYROID, NECK, &c.

Augerer (München).—*Treatment of the Goitre by Thyroid Gland.* "Münchener Med. Woch.," 1896, No. 4.

THE author prefers the use of the gland itself to all artificial preparations, because he believes that a part of the influence of the treatment is caused by decomposition of the thyroid substance. The effect on the goitre was often surprising; in other cases later improvement is observed. Sometimes they relapse. But the author believes that in some cases the use of thyroid gland has a deleterious influence on the heart, so that symptoms of weak heart are observed during operation. One of the cases operated on died from paralysis of the heart; the author believes caused by the use of the thyroid gland. *Michael.*

Baumann (Freiburg-i-Br.).—*On the Normal Existence of Iodine in the Animal Body.* "Zeitschrift für Physiol. Chemie," Band 21.

THE author has continued the experiments of Roos on the active substance of the thyroid gland. The substance did not lose its power by treatment with sulphuric acid. It was a brown mass—an organic composition of iodine. The existence of this substance shows the great influence of iodine in the treatment of goitres. The success of the thyroid treatment is due to this iodine compound. *Michael.*

Bloom, H. C.—*A Case of Myxædemæ.* "Philadelphia Policlinic," Dec. 28, 1895.

A CASE with very marked symptoms, with great slowness of thought and movement, several seconds being required before she could express a word. No thyroid gland could be made out. She was placed on five grains of dry thyroid extract three times a day. This quantity, however, appeared to cause sickness, and had to be reduced to half, which proved satisfactory, the patient being discharged as cured after seventy-two days' treatment. A relapse, however, took place after twelve months' interval, the patient presenting the same symptoms as in the first instance. She, however, improved rapidly under protoneuclein, and when last seen was perfectly well. *StGeorge Reid.*

Edes, R. T.—*Exophthalmic Goitre treated with Animal Extracts, and especially Extract of Thymus.* "Boston Med. and Surg. Journ.," Jan. 23, 1896.

GIVES the notice of a case of exophthalmic goitre in a female, aged thirty-four, successfully treated by aqueo-glycerine extract of thymus gland, three to four grains per diem. In six months the pulse, which had always been above 104, slowed down to 92, and she was enabled to return to light work. *StGeorge Reid.*

Glover, Thomas A.—*Etiology of Goitre.* "Brit. Med. Journ.," July 13, 1895.
GOITRE, common in a certain district, ascribed to increased blood supply to the thyroid due to the exertion consequent on carrying water in vessels upon the head.
Ernest Waggett.

Kiffin, John.—*Acute Bronchocle following Influenza.*

THE condition occurred in a middle-aged woman, subsiding in fifty-two hours, but leaving a slight permanent enlargement. In a subsequent attack of influenza the inflammation did not return.
Ernest Waggett.

Morris, H. C. L.—*Notes on the Etiology of Goitre.* "Brit. Med. Journ.," July 6, 1895.

DURING two and a half years the author has seen as many as fifty-five cases (only four males) of goitre among a population of two thousand residing in a district at the foot of the Chiltern Hills. The water is exceedingly hard, and frequently turbid with suspended chalk. Those inhabitants who use rain water, and not well water, for drinking purposes are immune. A girl aged twenty-three, in service in London, invariably gets an enlargement of the thyroid during visits to her home, the goitre disappearing on her return to London. Several instances of new arrivals becoming goitrous are known; and, in particular, three children of a family immigrating from a clay country became goitrous within six months, a fourth child, using rain water, remaining free. In only one case is there a suspicion of heredity, and intermarriage as a factor is excluded. The amount of iron in the water is infinitesimal, and the author considers that the endemic goitre, in this district at least, is due entirely to the carbonates of lime and magnesium. *Ernest Waggett.*

Murray, George.—*After-History of the First Case of Myxœdema cured by Thyroid Extract.* "Brit. Med. Journ.," Feb. 8, 1896.

RELATING the case of a woman, aged forty-six, who had previously suffered with myxœdema for four or five years, and who remained in perfect health more than four years subsequent to the commencement of treatment. She continues to take a drachm of the extract each week. A gentleman of forty-four similarly remains cured after three years of treatment with ten minims daily. *Ernest Waggett.*

Murray, George R.—*Some Effects of Thyroidectomy in Lower Animals.* "Brit. Med. Journ.," Jan. 25, 1896.

IT has been shown by Gley and others that rabbits in whom the thyroid has been extirpated, as a rule, die very shortly with acute symptoms. The author here proves by two experiments, performed on adult rabbits, that a chronic cachexia may be induced by the same procedure. In both cases was noticed an early development of hebetude, followed by absence of any change for eleven and twelve months respectively; after which period appeared extreme hebetude, swelling (gelatinous infiltration found *post mortem*), loss of hair, dryness of skin, and low temperature, warmth diminishing and cold increasing the gravity of the symptoms. After slaughter no thyroid tissue was found in one, and but a few fragments in the other specimen.
Ernest Waggett.

Roos (Freiburg-i-Br.).—*On the Influence of the Thyroid Gland on the Body, and Experiments on its Active Principle.* "Zeitschrift für Physiol. Chemie," Band 21.

THE thyroid gland, internally administered, produces increased excretion of nitrogen, of chlorine, chloronium, and phosphoric acid. It increases the decomposition of the albumen of the body, and, probably, also of the fat.

Michael.

Scherk (Bad., Homburg).—*Functional Relations of the Thyroid Gland to the Genital Organs.* "Aerztliche Rundschau," 1896, No. 3.

WITHOUT doubt a relation exists between the thyroid gland and the genital organs. In many animals this gland is enlarged during the time of rut.

Michael.

Scholz (Graz).—*On the Influence of Thyroid Treatment on the Organism, especially in Cases of Basedow's (Graves') Disease.* "Centralbl. für innere Med.," 1895, Nos. 43 and 44.

THE most important result of this biochemical examination is the fact that the excretion of phosphoric acid is increased in a high degree by administration of thyroid gland. The carefully compiled tables must be seen in the original.

Michael.

Smerton, C. W.—*Acute Bronchocoele following Influenza.* "Brit. Med. Journ.," May 18, 1895.

THIS condition arising in a middle-aged man during third day of convalescence from influenza. High temperature; skin reddened; subsidence in a few days, but some enlargement remaining after eighteen months.

Ernest Wiggatt.

Smith, Hugh.—*Enlarged Thyroid; Disappearance of Gland, followed by Myxœdema.* "Brit. Med. Journ.," Jan. 4, 1896.

A CASE of a female in whom, at the age of seventeen, was noticed enlargement of the throat and prominence of the eyeballs, with hurried, jerky manner both in speech and movements. This condition seems to have persisted to the age of twenty-one, when with the appearance of the catamenia the health became normal. Within a year of this symptoms of myxœdema supervened, and when seen at the age of twenty-six the latter were well developed and the thyroid gland imperceptible. A normal state of health returned after five months' treatment with dry sheep's thyroid.

Ernest Wiggatt.

Treysel (Freiburg).—*Examinations in Cases treated by Thyrosodin.* "Münchener Med. Woch.," 1896, No. 6.

IN nearly all cases an increased excretion of nitrogen is observed. The differences only can be explained by individual differences. The principal result is the identity of the effect of Baumann's thyrosodin and thyroid gland.

Michael.

Watkin-Browne, P. O.—*Acute Bronchocoele following Influenza.* "Brit. Med. Journ.," June 8, 1895.

A MONTH after influenza, in a middle-aged lady with slight goitre dating from childhood. Very considerable swelling of the left lobe occurred, with redness, high temperature, and dyspnœa. Relief was obtained by giving vent. with a blunt probe, to a thick, viscid, yellowish fluid. A discharging sinus persists.

Ernest Wiggatt.

EARS.

Barclay, Robert.—*Foreign Bodies in the Ear.* "Med. News," New York, Jan. 11, 1896.

THREE cases of foreign bodies in the external meatus, the first where a broken hair-pin had become firmly embedded in the floor of the auditory canal. The part healed rapidly after its removal. In the second case some small shot were thrown

into the meatus, setting up congestion of the drumhead. In the third a small dark foreign substance, supposed to be a cinder, was found adherent to the membrana tympani, and was removed with Sexton's hooked curette. *St George Reid.*

Barr, Thomas.—*Giddiness and Staggering in Ear Disease.* "Brit. Med. Journ.," Dec. 28, 1895.

THE author has found giddiness present in 5·5 per cent., marked, and 18 per cent., slight, of a series of 1276 consecutive ear cases. After classifying giddiness in accordance with the portion of the ear affected, he gives a description of the classical symptoms of Ménière's disease, with illustrative cases. Ménière's disease is relatively frequent in cases of ozæna, while middle-ear catarrh with nasal disease has occurred in many cases. Among constitutional dyscrasias, syphilis is a frequent exciting cause of labyrinthine hæmorrhage, while many cases may be traced to Bright's disease, atheromatous arteries, exertion, trauma, mumps, etc.

Ernest Waggett.

Deknatel (Utrecht).—*A Case of Absolute Hysterical Deafness.* "Nederland. Tijdschrift voor Geneesk.," 1895, II., No. 19. Abstracted in "Monats. für Ohrenheilk.," 1895, No. 12.

A SOLDIER, after the removal of a mass of cerumen from his ear, became more deaf. The air-douche brought on an epileptiform fit; deafness soon became absolute, without tinnitus or vertigo. He was not awakened from sleep by noises. Zwaardemaker eliminated labyrinthine disease by the occurrence of vertigo when a current of 1·5 milliamperé was applied, and normal nystagmus when the patient was on a revolving chair—also by the absence of any known cause. The diagnosis was made of hysterical deafness. This was confirmed by the detection of narrowing of both fields of vision (for colours also), and by the induction of an hysterical fit by pressure over the ileo-cæcal valve. "Suggestion" was employed, a cure by electricity being promised. On the application of the induced current a fit took place. A loud-sounding tuning-fork with a resonator was put to the patient's ear, who rose, and heard perfectly and permanently.

Dundas Grant.

Fritts, W. H.—*A Case of Old Fracture of the Handle of the Malleus, with Fibrous Union.* "Philadelphia Polyclinic," Dec. 28, 1895.

THE manubrium in this case was fractured about its centre, the tip being bent upwards and backwards, the interval being filled up by a band of yellowish-white callus. On inflation the tip was seen to be very freely mobile, being thrown upwards and forwards.

St George Reid.

Gomez, V.—*Tinnitus Aurium, and Some Results obtained by its Treatment with Coniin Hydrobromate.* "Annals Ophth. and Otol.," Oct., 1895, and Jan., 1896.

THE whole question of causation of tinnitus is carefully reviewed. The method of preparing the coniin is not gone into, nor are its properties very fully described; its chief action being directed to the motor nerves, less so to the efferent nerves. Twenty-three cases are reported in detail in which this drug was administered, with the following results: Cured, 1; very much improved, 6; not improved, 10. The maximum dose was $\frac{1}{5}$ gr., three times daily after food. Whether this was the sole treatment does not appear. Coniin gave the best results in mixed middle and internal ear cases.

R. Lake.

Gruber, Jos. (Vienna).—*An Abnormal Cavity in the Petrous Portion of the Temporal Bone.* "Monats. für Ohrenheilk.," 1895, No. 12.

IN a unique bone Prof. Gruber observed that the groove for the sigmoid sinus was abnormally shallow and in part almost obliterated. On section he found a large

accessory cavity communicating with the mastoid cells, and separated by very thin layers of bone from the sinus, the bulb of the jugular vein, and the internal auditory meatus. He comments on its inaccessibility and on the dangers likely to arise from infection of its contents.

Dundas Grant.

Holinger, J.—*Asepsis and Antisepsis in Otolology*. "Journ. Am. Med. Assoc.," Jan. 18, 1896.

A PLEA for greater care in the handling of ear cases than is generally used. Many cases of otorrhea which progress for years are due to lack of cleanliness in treatment when the inflammation first began.

Oscar Dodd.

Holinger, J.—*Mastoiditis and Sinus Phlebitis after Influenza*. "Chicago Med. Record.," Dec., 1895.

THE patient, when first seen some weeks after an attack of influenza, had temperature 103° to 105°, pulse 120 to 130, frequent chills, great pain and swelling of left side over mastoid, large perforation of drum, and ear filled with pus. She refused operation. The symptoms continued until five days later, when he found pulse 68, temperature 96° S., vomiting, and symptoms of brain pressure. Operation was now permitted, and after evacuating a large amount of pus from beneath periosteum and in mastoid cells, a small opening was found below the prominence of Fallopiian canal closed with granulations, and leading into a large extradural cavity filled with pus, granulations, and thrombosis. Patient recovered with fair hearing. He calls particular attention to the necessity for careful exploration in all directions in mastoid operations, as in this case he was ready to dress the wound when the probe was forced through the opening into the cavity.

Oscar Dodd.

Koerner, O. (Rostock).—*A New Type of Influenza Otitis*. "Arch. of Otol.," Vol. XXIV., Nos. 3 and 4.

IN one case perforation took place in the postero-inferior segment, and above this there arose a swelling which, on puncture, was found to contain pus. A few days later the membrane was hidden by half a dozen granulation-like swellings, which subsided, leaving at their site small incomplete rings, like the spots on a panther. The types previously recognized were one characterized by hemorrhagic myringitis, another by saccular or teat-like projections from the membrane, and a third by primary central mastoiditis with secondary involvement of the tympanum.

Dundas Grant.

Richardson, C. W. (Washington).—*Living Larvæ in Normal Auditory Canals*. "Arch. of Otol.," Vol. XXIV., Nos. 3 and 4.

A BABY in a foundling home became unaccountably peevish, and screamed as if from pain. A slight discharge was observed in the ears, and on careful inspection a white moving reflex suggestive of pus. The movements were too active, however, and by means of forceps one living larva was extracted from one ear and two from the other. After removal they were placed in ninety per cent. of alcohol, where they quickly died. Instillation of alcohol is recommended if extraction is impracticable.

Dundas Grant.

Richey, S. O.—*The Etiology of Tinnitus Aurium*. "Journ. Am. Med. Assoc.," Jan. 4, 1896.

AFTER reviewing the ordinary causes of tinnitus, he cites the condition reported by Politzer, where a "circumscribed primary affection of the labyrinthine capsules" progresses to the production of bony protuberances and finally complete ankylosis

of the stapes. Excision of membrana tympani with the incus and malleus does not reach the source of the trouble in these cases, and when benefit of the tinnitus results it is due to the inadvertent breaking up of the ankylosed stapes, and the relief is only temporary. The progress of the affection may sometimes be relieved by the internal administration of iodine. *Oscar Dodd.*

Scheibe, A. (Munich).—*A Histological Contribution to Deaf-Mutism due to Otitis Interna.* "Arch. of Otol.," Vol. XXIV., Nos. 3 and 4.

THE subject lost his hearing after a brain disease at four years of age, and died about four years later from scarlet fever and diphtheria. On *post-mortem* examination there was a recent otitis media due to the scarlet fever. The old changes in the labyrinths were very marked. The fenestræ were blocked up on the inner side; there was extensive ossification in the semicircular canals and the cochlea—especially the lowest whorls—and near the orifice of the aqueductus cochleæ (in the right organ only). Meningitis may reach the labyrinth by four paths—internal auditory meatus (lymphatics, etc., of modiolus), aqueductus vestibuli, aqueductus cochleæ (the most usual), middle ear and fenestræ. In this case the labyrinths were probably invaded through the aqueductus cochleæ. *Dundas Grant.*

Todd, F. C.—*Chronic Middle Ear Suppuration complicated with Suppurating Mastoiditis.* "Journ. Am. Med. Assoc.," Jan. 4, 1896.

THE author narrates his success in the use of hypnotism to control an unruly patient ten years of age during the painful dressing after a mastoid operation.

Oscar Dodd.

Walker, Secker.—*Case of Double Mastoid Disease with Septic Thrombosis of Lateral Sinus.* "Brit. Med. Journ.," April 13, 1895.

RECOVERY after operation. On each side abscesses occurred considerably behind the mastoid, not in immediate relation with bone disease. *Ernest Waggett.*

Obituary.

CHARLES FAUVEL.

THE death of this well-known and respected laryngologist, which has recently occurred in Paris, robs the specialty in France of one of its oldest and most prominent members. Wherever laryngology is known the name of Fauvel is honourably associated with it. The deceased specialist was born at Amiens in 1830, being the son of a well-known physician of the department of La Somme. Early in his career he held the appointments of "externe" and "interne" at the Lourcine, Enfants Assistés, the Lariboisière, and the Charité Hospitals. He early began to occupy himself with laryngology, his inaugural thesis in 1861 being on "La Laryngoscope au Point de Vue Pratique," in which he dealt with the utility of the mirror in the study and treatment of diseases of the larynx. He founded a clinic in Paris, where for three years he gratuitously attended the patients from all quarters, and where instruction was afforded to many who have since become prominent in the specialty. It is unfor-

tunate that Fauvel was so occupied with busy practice that he has left but few literary works, the best known of which is his large monograph chiefly dealing with tumours of the larynx, and entitled "*Traité du Maladies du Larynx.*" For these few obituary lines we are chiefly indebted to Dr. E. J. Moure, who remarks that Fauvel had a large heart, and all who came near him appreciated his kindly and sympathetic nature, and the pleasure he derived from meeting his old pupils, whose names he always cited with pride, happy to have witnessed their success. *R. W. Wolfenden.*

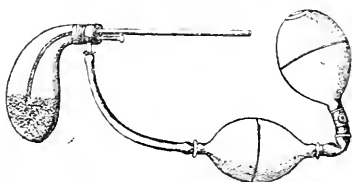
[We regret the unavoidable delay which has occurred in the appearance of this notice.]

NEW INSTRUMENTS AND PREPARATIONS.

THE COMPRESSED AIR INSUFFLATOR FOR POWDERS.

Agent—W. T. COOPER, 66, Oxford Street, W. 7s. net.

MR. COOPER informs us that he is the English retail agent for this most efficient powder-blower. We have used it experimentally in cases of otitis media suppurativa with aristol and boric acid powders, and, by its automatic action, "pulling the trigger" blows into the ear exactly the amount of powder required. It enables the aurist to prescribe powders for ear cases with an absolute certainty that the ear would not be choked up. For nose and throat work those who use powders will find this most useful.



COCAINE TABLOIDS—STRONG. NORMAL. AND WEAK.

After Dr. Schleich's Formulae, of Berlin.

BURROUGHS, WELLCOME, & CO., Snow Hill Buildings, London, E.C.

WE have used these tablets with complete satisfaction. They give an absolute local anæsthesia, especially should the precaution be taken to inject in the line of incision, and the fluid should be injected drop by drop in the track of the retiring needle. The formulæ are:—

No. 1. "STRONG"—Cocaine hydrochlor. 1·5 grain.
 Morph. hydrochlor..... 1·40 "
 Sodium chloride 1·5 "
 One "tabloid" dissolved in 100 minims of water yields the
 "strong" solution.

No. 2. "NORMAL"—Cocaine hydrochlor. 1·10 grain.
 Morph. hydrochlor..... 1·4 "
 Sodium chloride 1·5 "
 One "tabloid" dissolved in 100 minims of water yields the
 "normal" solution.

- No. 3. "WEAK"—Cocaine hydrochlor. 1-100 grain.
 Morph. hydrochlor..... 1-40 "
 Sodium chloride 1-5 "
 One "tabloid" dissolved in 100 minims of water yields the
 "weak" solution.

Books, &c., received.

Transactions of the American Laryngological Association, 1895.
 D. Appleton & Co., New York.

Presbyterian Eye, Ear, and Throat Charity Hospital Reports, No. 1.
 Williams & Co., Baltimore.

The Cyclist. Iliffe & Sons, 3, St. Bride Street, E.C.; and Coventry.

The Clinical Chronicle. E. E. Sattler, Cincinnati, Ohio.

REVIEWS.

L'Otoiatria, la Rinoiatria, e la Laringoiatria nelle Universite della Germania e dell'Austria. ("Otology, Rhinology, and Laryngology in the Universities of Germany and Austria.") A report to His Excellency Prof. Bacelli, Minister of Public Instruction. By Prof. VINCENZO COZZOLINO. Naples: Giannini & Sons. 1895.

OUR colleagues in Latin countries, under the direct patronage of their respective Governments, frequently make scientific journeys to neighbouring States, and then publish the record and criticism of their observations. Gouguenheim, Moure, Maurel, Nicolai, Poli, have all been "chiefs among ye takin' notes." Quite lately, Botey, of Barcelona, has published his record of "Pratica y Ensenanza Actual en Europa," while Lermoyez's charming book forms a complete guide to the school of Vienna.

The brochure before us is of more interest and value than many such diaries, thanks to the method in which the author has grouped his material. Instead of simply recording the steps of his journey, he has collected his observations under different medical headings instead of under the title of the various clinics visited. Thus, the first chapter is devoted to a description of the throat and ear departments in the several universities, reference being made to the installation, number of patients, expenses, etc.; under the second chapter is recorded the work being done on embryology; the third treats of the collections of normal and pathological anatomy, and so on. In this way a good picture is given in each chapter of the actual state in Germany of the department of otolaryngology under discussion, and much suggestive information is given

in these comparative studies. It is impossible to refer to these at any length, but we would call particular attention to the chapter on "Radical Ear Surgery," and the description of the methods of Küster, Schwartze, Lucae, and Zaufal. A timely warning might also be laid to heart from a case of Jansen's. A young woman twice had the mastoid opened, and twice had the cranial cavity explored (once by Prof. von Bergmann) for symptoms of cerebral abscess. In no instance was the diagnosis verified, and further study of her case showed that her symptoms were entirely hysterical.

Throughout the pages of the Neapolitan professor will be found much of interest and value on the work of our colleagues across the Rhine, the information being conveyed in a pleasant and chatty form.

StClair Thomson.

Ewald (Berlin).—*Die Erkrankungen der Schilddrüse, Myxödem, und Cretinismus.* ("The Diseases of the Thyroid Gland, Myxœdema, and Cretinism.") "Nothnagel's Specielle Pathologie und Therapie," Bd. XXII., Theil 1. With 19 woodcuts and one plate. Wien: Holder. 1896. 217 pp.

THE author describes the anatomy and physiology of the thyroid gland, with special attention to the influence of the extirpation of the gland on the general health, and relates shortly the rarer diseases, as acute inflammation, malignant tumours, and tuberculosis. He mentions the different theories on the propagation of goitre and cretinism—mountain air and its relation to the drinking water—without adopting any certain theory. The next chapters give the symptomatology of goitre, and its complication by compression of the œsophagus and trachea, diagnosis and progress of the disease, concluding with the therapy, with special regard to the treatment with thyroid tablets, as the surgical and its consequences, as cachexia strumipriva. The next chapters treat of cretinism, its relation to struma, its propagation, and its influence on the general health, especially on the skeleton. He regards the relation between struma myxœdema and cretinism, both the endemic and the sporadic form, as proven. Therapy is nearly powerless against both forms. An extract of the well-written and instructive chapters on myxœdema and cachexia strumipriva is not necessary for the readers of this journal, because the single papers on which this treatise is founded are already reported in this journal. The author concludes that the last years have brought a great deal of scientific material on this question, but that the subject is not yet cleared enough. A review on several hundred publications finishes this interesting and important work.

Michael.

Stoerk (Wien).—*Die Erkrankungen der Nase, des Rachens, und des Kehlkopfes.* ("The Diseases of the Nose, Pharynx, and Larynx.") With 89 woodcuts in the text, 4 tables, 334 pages. "Nothnagel's Specielle Pathologie und Therapie." Band XIII., Theil 1. Wien: Holder. 1895.

As part of a large handbook of pathology and therapeutics we should also expect a section for our specialty. In this regard we are disappointed. In such a handbook we should expect something on laryngeal catarrh, and yet this disease is not mentioned at all. We should like to see some

relation between the length of the chapters to the dignity and the frequency of the single diseases, and order in the succession of the single chapters. But this is a question on which the author may dispute with the editor who gave him the order to write a handbook or a treatise. But if we take the book as a collection of essays on rhino-laryngological subjects we have all cause to be grateful to the author, who, as one of the old school, relates his original views and the results of his rich experience, whose explanations are interesting to all and for everyone instructive; and the reader will not be angry that the work does not keep what the title promises. The first essays treat the nasal secretion, some forms of nasal inflammations (with special regard to pathological and anatomical details), empyema of the antrum of Highmore, some interesting remarks on gonorrhœa of the nose and mouth. Concerning ozæna Stoerk believes that it is rhinitis putrida atrophicans. By innumerable observations he is convinced that the etiology of all cases is hereditary syphilis, and a special form of this disease, which cannot be cured by antisyphilitic treatment. He calls this disease coryza syphilitica hereditaria, and has found that the disease can be alleviated but never cured.

Nasal hæmorrhages without local cause the author often has observed in boys and girls in the age of puberty. Girls cease sometimes if menstruation begins. Of great interest are some cases of hæmatoma of the pharynx combined with struma retropharyngalis. In two cases the author made a puncture, but this was followed by such hæmorrhage that he advises their being left alone. Both patients were cured. A pedunculated angioma is treated by multiple ligature.

The next chapter treats rhino-scleroma and Stoerk's blennorrhœa. The author publishes his great experiences on this subject, and a table of the cases observed by him. The short remarks on the treatment of adenoid vegetations are refreshing to read in a time in which so many unreasonable propositions are made on this subject. He uses Gottstein's ring-knife, without narcosis and without after-treatment. The next chapter treats lympho-sarcoma of the naso-pharynx, and the following, empyema of the frontal sinus and the ethmoidal sinuses. The next essays are illustrations of instruments and anatomical views, with remarks by the author. The last chapter treats of tuberculosis of nose and pharynx, and brings interesting remarks on heredity and on animal tuberculosis. Concerning the therapy, the author believes that the methods of Debove and Weir Mitchell are the best methods to treat tuberculous patients. Mountain air has good effects. The treatment with creosote, arsenic, cinnamomum, cantharides, tuberculin, as well as the surgical treatment of laryngeal phthisis, give negative results. A narration of cases of nasal tuberculosis concludes the book. Michael.

Kirstein (Berlin).—*Die Autoskopie des Kehlkopfes und des Luftohre ohne Spiegel.*

("Autoscopy of the Larynx and Trachea. Examination without Speculum.")

Berlin and Coblenz, 1896. With illustrations.

WE have already referred in this journal to the new method of examination inaugurated by Kirstein. The author now relates his experiences in a small book. The illumination may be the same as in laryngoscopy, but

the electric lamp fixed on the instrument is the best, because the head of the examiner is free. The instrumentarium consists of a spatula, a box, and a handle. By pressure on the spatula the epiglottis is erected so that the larynx is visible. The box prevents the closure of the mouth. Another spatula, which can only be applied in cocainized patients, depresses the epiglottis and gives a free view into the larynx. Some persons are easily examined by this method; in others it is difficult or impossible. By the autoscopia the vocal bands, the trachea, its bifurcation, and the pulsation of the tracheal wall can be seen; the bronchi can be seen better than by indirect examination. But the most important progress is the possibility to see the posterior laryngeal wall in its whole length. It is also possible to operate with this method. The instruments have nearly the same form as nasal instruments.

Michael.

Bresgen (Frankfort-a-M.)—*Krankheiten und Behandlungslehre der Nasen-Mund und Rachenhöhle, sowie des Kehlkopfes und der Luftröhre.* ("Pathology and Therapy of Diseases of the Nose, Mouth, and Pharynx, of the Larynx, and of the Trachea.") With numerous woodcuts. Third revised and enlarged edition. Wien: Urban und Schwarzenberg. 1896. 636 pages.

THE best proof of the great worth of Bresgen's work is the appearance of its third edition in so short a time, in spite of the great number of laryngo-rhinological manuals in Germany. And it must be said it is indispensable for every laryngologist because of the careful and complete reviews of literature which are found in no other work. This new edition contains all new papers published in the last years. On the contents we have nothing to add to our report on the second edition. The new one has the same advantages as the other, but also the same disadvantages, consisting in the curious idea of the author to translate the universally used Latin expressions into German words. By this means the use of the book is rendered unnecessarily difficult, not only for strangers, but also for German readers.

Michael.

Schmidt.—*Anatomy of the Human Head and Neck, graphically illustrated and described.* Revised by William S. Furneaux. G. Philip and Sons, 32, Fleet Street, E.C.

THIS carefully prepared booklet has, as its chief feature, built up plates of the head and neck muscles, etc., which turn back, layer after layer. It is not a book for advanced students, but it is one which we have every confidence in advocating for the elementary instruction of students, and for the art student it should have considerable merit.

BIBLIOGRAPHY.

DIPHTHERIA.

- ADAMS, W. F. School slates and diphtheria. *Lancet*, 1895, Vol. II., p. 1606.
- ATKINSON, F. P. Diphtheria and its causation. *Lancet*, 1895, Vol. II., p. 553.
- BAGINSKI, A. Zur Serumtherapie der Diphtherie in K. und K. Friedrich Kinder Krankenhaus. *Berl. Med. Woch.*, 1895, No. 37.
- BAGINSKI, A. Antitoxin treatment of diphtheria. *Brit. Med. Journ.*, 1895, Vol. II., p. 467.
- BECK, H. Transmission of diphtheria by non-sufferers. *Lancet*, 1895, Vol. II., p. 1496.
- BEKESS, A. Ein Fall von Wund-Diphtherie der Conjunctiva. *Wien. Med. Woch.*, 1895, No. 37.
- BERRY, W. Antitoxin treatment of diphtheria. *Brit. Med. Journ.*, 1895, Vol. II., p. 1101.
- BIGGS, H. Antitoxin treatment of diphtheria. *Brit. Med. Journ.*, 1895, Vol. II., p. 467.
- BIGGS, H. Diagnosis of doubtful cases of diphtheria. *Brit. Med. Journ.*, 1895, Vol. II., p. 528.
- BIGGS, H. Antitoxin. use of. for immunizing. *Brit. Med. Journ.*, 1895, Vol. II., p. 528.
- BROWN, J. W. H. Case of diphtheria treated by antitoxin. *Brit. Med. Journ.*, 1895, Vol. II., p. 779.
- BROWN, L. Antitoxin treatment of diphtheria. *Brit. Med. Journ.*, 1895, Vol. II., p. 466.
- BROWN, L. Diphtheria antitoxin serum in London. *Brit. Med. Journ.*, 1895, Vol. II., p. 1326.
- BUCKELL, L. Antitoxin treatment of diphtheria. *Brit. Med. Journ.*, 1895, Vol. II., p. 28.
- COLLINSON, J. Antitoxin and diphtheria statistics. *Brit. Med. Journ.*, 1895, Vol. II., p. 438.
- COOPER, J. W. A. The diphtheria bacillus on healthy surfaces. *Lancet*, 1895, Vol. II., p. 1003.
- COURLEY. Non-pathogenic streptococci and staphylococci in the throats of children. *Lancet*, 1895, Vol. II., p. 374.
- CROUCH, H. C. The detection of the diphtheria bacillus by its peculiar action towards certain stains. *New York Med. Journ.*, Vol. LXII., p. 430.
- DENNANT, J. Tale shield protector in diphtheria cases. *Lancet*, 1895, Vol. II., p. 449.
- DINEY. The statistics of diphtheria in London. *Lancet*, 1895, Vol. II., p. 488.
- DINEY, F. A. Vital statistics of diphtheria in London, 1891-5. *Brit. Med. Journ.*, 1895, Vol. II., p. 531.
- DOWDING, A. W. W. A shield protector for diphtheria. *Lancet*, 1895, Vol. II., p. 268.
- EMYRS-JONES, A. Diphtherial conjunctivitis and antitoxin. *Brit. Med. Journ.*, 1895, Vol. II., p. 1419.

ENGEE BEY. Die in Kairo mit der Serumtherapie bei Diphtheritis erzielten Resultate. Berl. Klin. Woch., Nos. 37 to 41.

EVANS, E. D. Diphtheria and schools. Brit. Med. Journ., 1895, Vol. II., p. 508.

EWING, J. The leucocytosis of diphtheria under the influence of serum therapy. New York Med. Journ., Vol. LXII. pp. 161, 196.

FISCHER, L. A plea for the more extensive use of antitoxin in diphtheria. New York Med. Journ., Vol. LXII., pp. 679, 710.

FITZ-GERALD, R. Diphtheria in the puerperium. Brit. Med. Journ., 1895, Vol. II., p. 77.

FITZ-GERALD, C. E. The diphtheria bacillus on healthy surfaces. Lancet, 1895, Vol. II., p. 1003.

FLESCH, M. Ein Fall von Haut Diphtherie. Berl. Klin. Woch., No. 43. Sammelforschung betreffend der bis zum Schluss des Jahres 1894 mit Diphtherieheilserum behandelten Krankheitsfälle. Berl. Med. Woch., No. 43. Die Statistik der Heilserumfrage. Wien. Med. Woch., 1895, No. 50.

HALL, J. C. Antitoxin treatment of diphtheria. Brit. Med. Journ., 1895, Vol. II., p. 467.

HAMILTON, W. M. *See* EMYRS-JONES.

HOLLIS, W. A. Diphtheria antitoxin as culture medium for diphtheria bacillus. Brit. Med. Journ., 1895, Vol. II., pp. 1194, 1390.

HOLMES, W. A. A case of diphtheria treated with antitoxin. Lancet, 1895, Vol. II., p. 1427.

JOHNSTON, A. Antitoxin treatment of diphtheria. Brit. Med. Journ., 1895, Vol. II., p. 465.

KIRK, J. Antitoxin treatment of diphtheria. Brit. Med. Journ., 1895, Vol. II., p. 1101.

KLEIN. The diagnostic value of the diphtheria bacillus. Lancet, 1895, Vol. II., p. 363.

KLEIN, E. Diagnosis of doubtful cases of diphtheria. Brit. Med. Journ., 1895, Vol. II., pp. 526-8.

KLEIN. Diphtheria bacillus. Med. Press and Circ., 1895, Vol. LX., pp. 177, 387.

KÖNIG, H. Zur Diagnose und Behandlung der Diphtherie und der Scharlachdiphtherie. Wien. Med. Woch., 1895, No. 40.

LUSON, T. Antitoxin in diphtheria. Brit. Med. Journ., 1895, Vol. II., p. 197.

MARTIN, B. R. Diphtheria—Discussion on. Brit. Med. Journ., 1895, Vol. II., pp. 561, 747.

MARTIN, B. R. Local treatment of diphtheria. Brit. Med. Journ., 1895, Vol. II., p. 1423.

MARTIN, S. Diphtheria and its treatment by antitoxin. Lancet, 1895, Vol. II., pp. 287, 355.

MARTIN, S. Antitoxin treatment of diphtheria. Brit. Med. Journ., 1895, Vol. II., p. 461.

MARTIN, S. Diphtheria—Discussion on. Brit. Med. Journ., 1895, Vol. II., p. 683.

MASSON, J. Antitoxin treatment of diphtheria. Brit. Med. Journ., 1895, Vol. II., p. 27.

MULLER, K. Die Serumbehandlung der Diphtherie. Berl. Klin. Woch., 1895, No. 37.

NEUDÖRFER, I. Neue Gesichtspunkte zur Pathogenese und Therapie der Diphtherie. Wien. Med. Woch., 1895, No. 28.

- PETERS, E. Varieties of diphtheria bacilli. *Brit. Med. Journ.*, 1895, Vol. II., p. 1557.
- PURDY, J. R. Antitoxin treatment of diphtheria. *Brit. Med. Journ.*, 1895, Vol. II., p. 28.
- RANKE. Antitoxin treatment of diphtheria. *Brit. Med. Journ.*, 1895, Vol. II., p. 465.
- ROBERTSON, W. Immunization of horses for preparation of diphtheria antitoxin. *Lancet*, 1895, Vol. II., p. 461.
- RODGER, J. H. Antitoxin treatment of diphtheria. *Brit. Med. Journ.*, 1895, Vol. II., p. 26.
- SEMPLE, D. Antitoxin as a culture medium for diphtheria bacillus. *Brit. Med. Journ.*, 1895, Vol. II., p. 907.
- SHARP, G. Injection of antitoxin by the rectum. *Brit. Med. Journ.*, 1895, Vol. II., pp. 670, 681.
- SHUTTLEWORTH, E. B. Laboratory notes on the bacteriology of diphtheria. *Lancet*, 1895, Vol. II., p. 665.
- SRIZNOW, G. Ueber die Behandlung der Diphtherie mit künstlich dargestellten Antitoxinen. *Berl. Klin. Woch.*, 1895, Nos. 30, 31.
- UNDERHILL, E. Diagnosis of doubtful cases of diphtheria. *Brit. Med. Journ.*, 1895, Vol. II., p. 528.
- WALKER, J. Antitoxin treatment of diphtheria. *Brit. Med. Journ.*, 1895, Vol. II., p. 27.
- WALSH, D. What is antitoxin rash? *Med. Press and Circ.*, 1895, Vol. LX., p. 316.
- WEBBER, H. W. Antitoxin treatment of diphtheria. *Brit. Med. Journ.*, 1895, Vol. II., p. 27.
- WEBBER, H. W. Antitoxin as culture medium for diphtheria bacillus. *Brit. Med. Journ.*, 1895, Vol. II., p. 1265.
- WILLIAMS, W. Cats and diphtheria. *Brit. Med. Journ.*, 1895, Vol. II., p. 74.
- WRIGHT, A. E. Antitoxin as culture medium for bacillus diphtheria. *Brit. Med. Journ.*, 1895, pp. 907, 1325.
- WRIGHT, J. C. Epidemic of diphtheria. *Brit. Med. Journ.*, 1895, Vol. II., p. 1616.
- YOUNG, T. B. Diphtheria in London. *Lancet*, 1895, Vol. II., p. 810.

NOSE AND NASOPHARYNX.

- ALLEN, R. H. A case of persistent hicough and sneezing. *Lancet*, 1895, Vol. II., p. 1019.
- ARMSTRONG, N. L. A new syringe for treating epistaxis. *New York Med. Journ.*, Vol. LXII., p. 634.
- BARR. Treatment of adenoid vegetations of the naso-pharynx. *Lancet*, 1895, Vol. II., p. 657.
- BATTEN, R. Association of myopia with disease of the nose and pharynx. *Lancet*, 1895, Vol. II., p. 96.
- BOSWORTH, F. A. Mucous polypi of the nose. *Brit. Med. Journ.*, 1895, Vol. II., p. 480.
- BOSWORTH, F. H. A case of melancholia dependent on ethmoid disease and cured by intra-nasal operation. *New York Med. Journ.*, Vol. LXII., p. 449.
- BOSWORTH, F. H. A case of suppurative ethmoidal disease. *New York Med. Journ.*, Vol. LXII., p. 450.

BOSWORTH, F. H. The relation of vaso-motor disturbance of the upper air tract. *New York Med. Journ.*, Vol. LXII., p. 655.

BOWLBY, A. Fibro-angioma of the naso-pharynx treated by operation. *Lancet*, 1895, Vol. II., p. 913.

BOYD, S. Temporary resection of upper jaw for naso-pharyngeal growth. *Brit. Med. Journ.*, 1895, Vol. II., p. 1235.

BRONNER, A. Some common forms of reflexes of nasal origin. *Lancet*, 1895, Vol. II., p. 204.

BROWN, W. H. Fracture of ethmoid, with basal meningitis. *Lancet*, 1895, Vol. II., p. 1506.

BRYAN, J. H. The study of suppurative disease of the accessory sinuses. *New York Med. Journ.*, Vol. LXII., pp. 450, 470.

CAMPBELL, H. Chronic nasal obstruction. *Lancet*, 1895, Vol. II., p. 1255.

CASSELBERRY, W. E. Electrolysis by a current controller for the reduction of spurs of the nasal septum. *New York Med. Journ.*, Vol. LXII. p. 266.

CLEWOW, A. H. W. The diagnosis of tonsillitis. *Lancet*, 1895, Vol. II., p. 1458.

COLLIER, M. P. M. Chronic nasal obstruction. *Lancet*, 1895, Vol. II., pp. 1170, 1189.

COLLIER, M. P. M. Chronic nasal obstruction. *Med. Press and Circ.*, 1895, Vol. LX., p. 515.

COLLIER, M. P. M. Trigeminal neuralgia due to nasal disease. *Lancet*, 1895, Vol. II., p. 91, 529.

DALBY, SIR W. B. Adenoid growths in the pharynx. *Lancet*, 1895, Vol. II., p. 1349.

DALY, W. H. Mucous polypi of the nose. *Brit. Med. Journ.*, 1895, Vol. II., p. 480.

DE ROALDES, A. W. Mucous polypi of the nose. *Brit. Med. Journ.*, 1895, Vol. II., p. 481.

GUYE. Mucous polypi of the nose. *Brit. Med. Journ.*, 1895, Vol. II., p. 474.

HAJEK, M. Ein Fall von Empyem der Kielbeinhöhle mit bedrohlichen Stauungserscheinungen. *Wien. Med. Woch.*, 1895, Nos. 32, 33.

HILL, W. Mucous polypi of the nose. *Brit. Med. Journ.*, 1895, Vol. II., p. 480.

HODGKINSON, A. Mucous polypi of the nose. *Brit. Med. Journ.*, 1895, Vol. II., p. 479.

HOOKE, J. S. Chloride of ammonium pipe inhalers. *Brit. Med. Journ.*, 1895, Vol. II., p. 844.

JULER, H. E. Carcinoma of body of sphenoid. *Brit. Med. Journ.*, 1895, Vol. II., p. 957.

KOLL, TH. Die Anwendung des Nasophens in der rhinologischen und otologischen Praxis. *Berl. Klin. Woch.*, 1895, No. 29.

KYLE, D. B. Fibrinoplastic exudates, with reports of two cases of laminated fibrinoplastic rhinitis. *New York Med. Journ.*, Vol. LXII., p. 5.

LAKE, R. Mucous polypi of the nose. *Brit. Med. Journ.*, 1895, Vol. II., p. 480.

LUC. Mucous polypi of the nose. *Brit. Med. Journ.*, 1895, Vol. II., p. 474.

MACKENZIE, J. N. Mucous polypi of the nose. *Brit. Med. Journ.*, 1895, Vol. II., p. 480.

MAYER, E. Deviation of the cartilaginous nasal septum. *New York Med. Journ.*, Vol. LXII., p. 728.

- McBRIDE, P. Mucous polypi of the nose. *Brit. Med. Journ.*, 1895, Vol. II., p. 478.
- MEYER, W. Adenoid vegetations. *Brit. Med. Journ.*, 1895, Vol. II., p. 1513.
- PIERCE, N. H. Syphilis of the nose. *New York Med. Journ.*, Vol. LXII., p. 673.
- PINDER, G. Empyema of the antrum of Highmore. *Lancet*, 1895, Vol. II., p. 979.
- ROCHE, J. Treatment of hiccough and sneezing. *Lancet*, 1895, Vol. II., p. 1086.
- SCHMIDT, M. Mucous polypi of the nose. *Brit. Med. Journ.*, 1895, Vol. II., p. 480.
- SEWILL, J. S. Removal of tooth from floor of nose. *Brit. Med. Journ.*, 1893, Vol. II., p. 693.
- SPICER, S. Mucous polypi of the nose. *Brit. Med. Journ.*, 1895, Vol. II., p. 480.
- STEWART, M. New cure for asthma. *Brit. Med. Journ.*, 1895, Vol. II., p. 1595.
- STOKER, G. Method of preventing bleeding in removing naso-pharyngeal tumours. *Brit. Med. Journ.*, 1895, Vol. II., p. 1100.
- TAYLOR, S. J. Adenoid growths in the pharynx. *Lancet*, 1895, Vol. II., p. 1457.
- THOMSON, STC. Micro-organisms in inspired air. *Lancet*, 1895, Vol. II., p. 492.
- TILLEY, J. H. Cases of parosmia. *Lancet*, 1895, Vol. II., p. 907.
- THRASHER, A. B. Congenital osseous stenosis of the nares. *New York Med. Journ.*, Vol. LXII., pp. 750, 760.
- THRASHER, A. B. Necrosis of the middle turbinate. *New York Med. Journ.*, Vol. LXII., p. 708.
- VEEDER, A. T. Air pump and nasal inflator. *New York Med. Journ.*, Vol. LXII., p. 91.
- WATSON, S. Distortion of the septum nasi successfully treated. *Lancet*, 1895, Vol. II., p. 93.
- WATSON, S. Nasal polypi and tacycardia. *Brit. Med. Journ.*, 1895, Vol. II., p. 1097.
- WILLIAMS, P. W. Mucous polypi in the nose. *Brit. Med. Journ.*, 1895, Vol. II., 481.
- WINCKLER, E. Ueber chirurgische Behandlung gewisser Nasenstenosen. *Wien. Med. Woch.*, 1895, Nos. 42, 47.
- WRIGHT, J. Mycosis of the nose and throat. *New York Med. Journ.*, Vol. LXII., p. 1.
- WRIGHT, J. A true papilloma of the nasal septum. *New York Med. Journ.*, Vol. LXII., pp. 747, 770.
- WRIGHT, J. Cyst of the naso-pharynx and cyst of oro-pharynx. *New York Med. Journ.*, Vol. LXII., p. 750.
- ZUCKERKANDL. Mucous polypi in the nose. *Brit. Med. Journ.*, 1895, Vol. II., 476.

MOUTH, PHARYNX, &c.

- ALLEN, H. Foreign bodies in the oesophagus. *New York Med. Journ.*, Vol. LXII., p. 203.
- ANDERSON, J. H. Angioma of pharynx. *Brit. Med. Journ.*, 1895, Vol. II., p. 77.

- BACON, G. Sarcoma of the neck involving the tonsil, etc. *New York Med. Journ.*, Vol. LXII., p. 269.
- BLIGH, W. Foot and mouth disease in a boy. *Lancet*, 1895, Vol. II., p. 1355.
- BORS, L. A new mouth-gag. *New York Med. Journ.*, Vol. LXII., p. 123.
- BROWN, L. Infectiousness of lacunar tonsillitis. *Brit. Med. Journ.*, 1895, Vol. II., p. 1022.
- CONNER, J. T. Cases of pigmentation of the mouth and lips and chronic pyalism. *Lancet*, 1895, Vol. II., p. 1169.
- FARLOWE, J. W. Some remarks on removal of the tonsils. *New York Med. Journ.*, Vol. LXII., p. 592.
- FRAENKEL, B. Infectious nature of lacunar tonsillitis. *Brit. Med. Journ.*, 1895, Vol. II., pp. 1018, 1022.
- GLEITSMANN. Infectiousness of lacunar tonsillitis. *Brit. Med. Journ.*, 1895, Vol. II., p. 1022.
- HILL, W. Infectiousness of lacunar tonsillitis. *Brit. Med. Journ.*, 1895, Vol. II., p. 1021.
- HODGKINSON, A. Infectiousness of lacunar tonsillitis. *Brit. Med. Journ.*, 1893, Vol. II., p. 1021.
- HOPE, G. B. Is acute amygdalitis in any way dependent on the rheumatic diathesis? *New York Med. Journ.*, Vol. LXII., p. 210.
- HULEN, V. H. Cavernous angioma of the tongue. *New York Med. Journ.*, Vol. LXII., p. 531.
- LANPHEAR, E. Two cases of sarcoma of the tonsil. *New York Med. Journ.*, Vol. LXII., p. 134.
- LAWRENCE, L. Infectiousness of lacunar tonsillitis. *Brit. Med. Journ.*, 1895, Vol. II., p. 1022.
- LEE, R. The diagnosis of tonsillitis. *Lancet*, 1895, Vol. II., p. 1393.
- MACINTYRE, J. Infectiousness of lacunar tonsillitis. *Brit. Med. Journ.*, 1895, Vol. II., pp. 1020, 1022.
- MONTAGUE, J. H. The tonsil guillotine. *Brit. Med. Journ.*, 1895, Vol. II., p. 84.
- NEWCOMB, J. E. Ludwig's angina. *New York Med. Journ.*, Vol. LXII., pp. 652, 661.
- OWEN, E. Operative treatment of cleft palate. *Brit. Med. Journ.*, 1895, Vol. II., p. 1360.
- PAYNE, W. H. Superficial affections of the red portion of the lips. *Brit. Med. Journ.*, 1895, Vol. II., p. 1529.
- RIPAULT. Un cas d'angine de Ludwig. *Ann. de l'Oreille*, Sept., 1895.
- ROPER, L. Improved tonsil guillotine. *Brit. Med. Journ.*, 1895, Vol. II., p. 18.
- SCHMIDT, M. Infectiousness of lacunar tonsillitis. *Brit. Med. Journ.*, 1895, Vol. II., p. 1022.
- SEMON, F. Infectiousness of lacunar tonsillitis. *Brit. Med. Journ.*, 1895, Vol. II., p. 1021.
- SOKOLOWSKI. Infectiousness of lacunar tonsillitis. *Brit. Med. Journ.*, 1895, Vol. II., p. 1022.
- SYMES, J. O. Bacteriological examination of the throat in some fevers. *Lancet*, 1895, Vol. II., p. 455.
- TERRY, J. Sore throat and the state of the tongue in influenza. *Lancet*, 1895, Vol. II., p. 906.
- THOMSON, STC. Infectiousness of lacunar tonsillitis. *Brit. Med. Journ.*, 1895, Vol. II., p. 1022.

- THRESH, J. Infectious sore throats. *Lancet*, 1895, Vol. II., p. 402.
 TURCK, F. B. Diseases of the mouth, etc. *New York Med. Journ.*, Vol. LXII., p. 648.
 VEEDER, A. T. A modified cold snare amygdalotome. *New York Med. Journ.*, Vol. LXII., p. 893.

LARYNX, TRACHEA, &c.

- ARONSOHN, E. Fremdkörper in den Luftwegen. *Berl. Klin. Woch.*, 1895, No. 45.
 BARK. Removal of singers' nodes. *Brit. Med. Journ.*, 1895, Vol. II., p. 1614.
 BONAIN. Laryngite striduleuse et diphthérie. *Rev. Mens. de Laryng.*, May 1, 1895.
 BOND, J. W. Early operation in malignant disease of larynx. *Brit. Med. Journ.*, 1895, Vol. II., p. 1035.
 BOYD, A. B. Anæsthetics in throat cases. *Brit. Med. Journ.*, 1895, Vol. II., p. 1638.
 BRINDEL. De l'herpès du larynx. *Rev. Mens. de Laryng.*, Mar. 15, 1895.
 BRINDEL. Atrophie testiculaire d'origine rhumatismale. Examen du larynx et de la voix. *Journ. de Méd. de Bordeaux*, June 16, 1895.
 BRODI. Paralysie de la corde vocale consécutive à un anévrysme cervical. *Rev. Mens. de Laryng.*, April, 1895.
 BROECKAERT. Recherches expérimentales sur le centre cortical du larynx. *Rev. de Laryng.*, Aug. 1, 1895.
 BRONNER, A. Intra-laryngeal injections. *Brit. Med. Journ.*, 1895, Vol. II., p. 1024.
 BRONNER, A. Chorditis tuberosa. *Brit. Med. Journ.*, 1895, Vol. II., p. 1099.
 BUTLIN, H. T. Early radical treatment of malignant disease of larynx. *Brit. Med. Journ.*, 1895, Vol. II., p. 1033.
 CATHCART, G. C. Function of laryngeal ventricles and ventricular bands. *Brit. Med. Journ.*, 1895, Vol. II., p. 1024.
 CLAREMONT, C. C. Function of laryngeal ventricles and ventricular bands. *Brit. Med. Journ.*, 1895, Vol. II., p. 1024.
 COEN, R. Ueber Sprachstörungen und deren Behandlung. *Wien. Med. Woch.*, 1896, Nos. 30 and 31.
 COHEN, J. S. Case of complete laryngectomy. *Brit. Med. Journ.*, 1895, Vol. II., p. 1100.
 CORRADI. Considérations sur les sténoses du larynx. Nouvelle méthode de dilatation. *Ann. de l'Oreille*, Sept., 1895.
 DELAVAN, D. B. Indications for early radical treatment of malignant disease of larynx. *Brit. Med. Journ.*, 1895, Vol. II., p. 1029.
 DELAVAN, D. B. Chorditis tuberosa. *Brit. Med. Journ.*, 1895, Vol. II., p. 1099.
 DELAVAN, D. B. The influence of chronic diseases of the throat upon certain defects of speech, especially stammering. *New York Med. Journ.*, Vol. LXII., p. 368.
 DE SANTI, F. Operation of thyrotomy. *Brit. Med. Journ.*, 1895, Vol. II., p. 1025.
 DIDSBURY. De la paralysie récurrentielle unilatérale considérée au point de vue étiologique et pathogénique. *Archiv. de Laryng.*, March and April, 1895.
 DOUGLAS, O. B. Modern methods of treating diseases of the nose and throat. *New York Med. Journ.*, Vol. LXII., p. 518.

JOURNAL OF LARYNGOLOGY, RHINOLOGY, AND OTOTOLOGY.

Original Articles are accepted by the Editors of this Journal on the condition that they have not previously been published elsewhere.

Twenty-five reprints are allowed each author. If more are required it is requested that this be stated when the article is first forwarded to this Journal. Such extra reprints will be charged to the author.

The Editors are not responsible for opinions expressed in original Articles or Abstracts in this Journal.

Editorial Communications are to be addressed to "Editors of JOURNAL OF LARYNGOLOGY, care of Reiman Publishing Company, Limited, 11, Adam Street, Strand, London, W.C."

RÖNTGEN RAYS IN LARYNGEAL SURGERY.

(Preliminary Note.)

By JOHN MACINTYRE, M.B.C.M., F.R.S.E.

THAT Röntgen's brilliant discovery will prove useful in general surgery is no longer a matter of doubt. Only a few weeks ago photographs of the bones of the hand and foot were looked upon with curiosity mixed with speculative interest, and now the greater portion of the human skeleton, including the vertebral column and the extremities, have been photographed. The question naturally arises, however, will this important discovery be of use in our special department? and as I have been making a number of experiments in this direction, the following preliminary notes may be of some interest :—

For cryptoscopic purposes—and this must in the end be of more importance than photography—more expensive and powerful apparatus must be at the surgeon's disposal. For this work a current of something like ten volts and twelve to sixteen amperes is required at least, and a good coil, with a well-made interrupter, having a spark of from six to eight inches, also a Crookes tube at the proper vacuum. For photographic purposes the current need not be so powerful, and even a two to four inch spark coil may be used for most practical purposes. During my experiments I have been fortunate in having currents and coils of much greater strength than the above-mentioned; my work has been mainly done with an Apps coil, and the best results have been obtained with Newton's tubes. I have tried a number of fluorescent screens for the cryptoscope, but find the potassium platino-cyanide and barium platino-cyanide the best. Calcium tungstate in its crystalline form, as recommended by Mr. Edison, is also good. With this apparatus I have been able to see shadows of the different bones of the extremities,

and the vertebral column, ribs, clavicle, and scapula, as will be seen further on.

In the present state of our knowledge it may at once be stated that photography, by means of Röntgen rays, is in a more advanced state than cryptoscopy. With regard to the former, I may say that I have on the living subject photographed the vertebral column in the chest and neck (above and below the lower maxilla) with such definition that destruction of bone can be easily detected. I have also photographed the chest for the presence of foreign bodies, as will be mentioned further on; and I have been able to photograph the larynx in the human subject, the picture obtained showing the base of the tongue, hyoid bone, thyroid and cricoid cartilages with epiglottis; the opening at the upper part of the œsophagus is also seen, and the spine is indicated behind. I have also photographed the bones of the face in health and disease, in the latter case showing destruction of the upper jaw, the result of malignant disease. Experimenting on the dead subject, I have also been able to obtain excellent photographs of the presence of foreign bodies in and around the region of the larynx, as well as ossification in the cartilages.

With regard to the cryptoscope, the light easily penetrates the tissues of the neck and chest, and I have seen sufficient of the former to enable me to say that many foreign bodies might be detected with the eye without photography at all. In this department I have to record an interesting case sent to me by Dr. Rutherford and Professor Henry E. Clark. The patient had swallowed a halfpenny six months ago, and on examining him by means of the fluorescent screen I could easily see the round black shadow of the coin at the level of the third dorsal vertebra. This is important and interesting, because the boy referred his pain to the cardiac orifice of the stomach. I afterwards photographed the case, but the foreign body could easily be seen by the eye.

For the examination of the antrum of Highmore I made a number of experiments in the way of obtaining small tubes to go into the mouth. These are not so easily obtained, nor, as yet, as satisfactory as the large tubes. I therefore fell back upon another plan, viz., placing the Crookes tube outside. I made a small laryngo-cryptoscopic mirror and a cryptoscopic tongue depressor, the salt being placed on one side of the glass, cut to the proper size and shape and covered in with aluminium. In this case the x rays are generated outside of the mouth. For the antrum, where difference of density is to be detected, the tube is, of course, to be placed above the level of the face and the mirror inside of the mouth with the platinum surface towards the palate. In the case of foreign bodies or for viewing other parts of the mouth, the Crookes tube will be placed below the lower maxilla. This instrument I described at the meeting of the Royal Society in Edinburgh on the 6th inst. I hope at the next meeting of the British Laryngological Association to place the photographs and appliances before the Fellows. As far as I have been able to judge, the x rays are going to be much more useful in our special department than we had at first anticipated.

THE LARYNGOLOGICAL AND OTOLOGICAL CLINICS OF ENGLAND AND SCOTLAND.

THE object of compiling the following tables has been to enable gentlemen wishing to obtain post-graduate instruction in England and Scotland to have before them, in tabular form, a full list of all clinics open to them. And we take this opportunity of expressing our sense of gratitude for the universal kindness and courtesy shown by the deans and secretaries of the various institutions in supplying the JOURNAL with the information asked for.

Although it is obvious that the individual teacher is really the magnet which attracts—more, indeed, than the amount of material at the disposal of the student—yet it has not been found practicable here to insert their names; and reference to the “Medical Directory” will give the required information.

The Editors will be grateful for notice of any irregularity in the present text, and in future for changes made in the clinics, as well as for notice of omissions or additions.

Name.	Ear Clinic.	Throat Clinic.	Remarks.	Duration.	Fees.
ST. BARTHOLOMEW'S	Tu., F., 2 p.m.				
ST. GEORGE'S	Tu., 2 p.m.	Tu., F., 2.30 p.m.		3 months	£15 Ees.
ST. THOMAS'S	M., 1.30 p.m.	Tu., F., 1.30 p.m.		3 months	£1 3s. each
GUY'S	Tu., 1 p.m.	F., 2 p.m.		3 months	£3 2s.
ST. MARY'S	M., Tu., 3 p.m.	Tu., F., 1.30 p.m.			£3 3s.
KIND'S	Tu., 2.30 p.m.	M., 1.30 p.m.			£3 3s.
UNIVERSITY	M., Th., 9 a.m.	M., Th., 9 a.m.			
CHARING CROSS	F., 9.30 a.m.	F., 9.30 a.m.			
LONDON	W., 9 a.m.				
ROYAL FREE	Sa., 3 p.m.	Sa., 3 p.m.			
WESTMINSTER	W., Sa., 9 a.m.	W., Sa., 9 a.m.			
MIDDLESEX	Tu., 9 a.m.	Tu., 9 a.m.			
METROPOLITAN					
MEDICAL SCHOOLS.					
The fee includes the whole hospital practice					
No post-graduate instruction in Aural Department					
Fees, etc., enquires to be made of the Dean.					
Demonst. Throat, Fri., 3 p.m. Fees for hosp. pt., each dept.					
Throat operations, Fri., 1.30					
For fees apply to the Dean.					
Attendance free on application to Dean. For particulars					
regarding Throat Course apply Physician in charge.					
Lectures: Aural, Wed., 3 p.m., Fri., 3 p.m. Summer session					
for lady students.					
No post-graduate course.					
Ditto.					

Continued on next page.

Name.	Ear Clinic.	Throat Clinic.	Remarks.	Duration.	Fees.
HOSPITALS.					
GOLDEN SQUARE	{ Daily, 2.30 p.m. M., 9 a.m.	Daily, 2.30 p.m. Tu., F., 6.30 p.m.	£2 2s. per course of Lectures given in the winter Fee for Lectures per term £1 1s. Hospital practice Throat Hospital for London post-graduate course Clinical Lectures, apply to Secretary.	{ 3 months 6 months 1 month 2 months Perp.	{ £3 3s. £5 5s. £1 1s. £2 2s. £5 5s.
LONDON THROAT	{ Daily, 2 p.m. Tu., F., 5.30 p.m.	Tu., F., 6 p.m. Tu., F., 6.30 p.m.		{ 3 months 6 months	{ £3 3s. £5 5s.
CENTRAL DITTO	{ M., Tu., F., 5.30 p.m. M., W., Sa., 2.30 p.m.	.....		{ 3 months	{ £2 2s.
ROYAL EAR	{ M., W., Sa., 3 p.m. Tu., 9.30 a.m.	.....		3 months	£2 2s.
.....	{ Th., F., 7.30.	.....		3 months	£2 2s.
METROPOLITAN.					
GREAT NORTHERN CENTRAL WEST LONDON	Tu., F., 2.30 p.m. Th., Sa., 10 a.m.	Tu., F., 2.30 p.m. Sa., 10 a.m.	Commence third Wed. Jan., May, Oct. For information apply Hon. Sec. post-graduate course.	3 months 3 months	£2 2s. £3 3s.
AND PROVINCIAL MEDICAL SCHOOLS.					
OWEN'S COLLEGE, MANCHESTER	{ M., 2 p.m. Tu., 1 p.m. W., Th., F., 2 p.m.	.....	Clinics at Ear Institute free. Post-graduate course, June, first week	{ 1 course 2 courses Perp.	{ £1 1s. £1 11s. 6d. £2 2s.
UNIVERSITY OF DURHAM	Th., 10 a.m.	Th., 10 a.m.	None.	3 months	£1 1s.
ABERDEEN GENL. DISPENSARY	Tu., F., 2.30 p.m.	Tu., F., 3.30 p.m.	Courses commence April, last until June.	.....	.....
VICTORIA UNIVERSITY,	M., Th., 2 p.m.	M., Th., 2 p.m.	At Royal Infirmary. No course.	.....	.....
UNIVERSITY COLLEGE, LIVERPOOL	Daily, 9.30 a.m.	Daily, 9.30 a.m.	For fees enquire of the Dean.	.....	.....
BIRMINGHAM	Daily, 9.30 a.m.	W., 1.30 p.m.	.....	.....	.....
YORKSHIRE COLLEGE, LEEDS	M., 2.30. W., 1.30. F., 1.0	.....	.....	.....	.....
EDINBURGH.					
EYE, EAR, AND THROAT INFIRMARY.	M., Th., Sa., 12 noon	Tu., F., 4 p.m.	No regular lectures	3 months	£2 2s.
ROYAL INFIRMARY	Tu., F., 11 to 12 noon	Tu., F., 11 to 12 noon	No post-graduate instruction.	.....	.....
GLASGOW.					
ANDERSON'S COLLEGE	Th., 8 p.m.	.....	Ear courses commence May and November	3-6 months	£1 1s.
CENTRAL DISPENSARY	Tu., F., 7 p.m.	Tu., F., 3 (summer)	Apply Dean for fees, syllabus of Lectures, etc.	.....	Free
ST. MUNGOS COLLEGE	Tu., F., 12 (winter)	Tu., W., 3 p.m.	.....	.....	.....
ROYAL INFIRMARY	Tu., W., 3.30 p.m.	.....	.....	.....	.....
DUNDEE.					
ROYAL INFIRMARY	Tu., F., 2 p.m. (winter)	Tu., F., 2 p.m. (winter)	No post-graduate course	.....	£1 1s.
THROAT AND EAR INSTITUTION	W., Th., 2 p.m. (summer)	M., Th., 2 p.m. (summer)	.....	.....	.....

SOCIETIES' MEETINGS.

PROCEEDINGS OF THE LARYNGOLOGICAL SOCIETY OF LONDON.

Ordinary Meeting, March 11th, 1896.

FELIX SEMON, M.D., F.R.C.P., *President, in the Chair.*

THE Morbid Growths Committee report that they received from Dr. StClair Thomson specimens consisting of three sections of a growth, and the following notes of the case :—

Microscopic specimen, labelled "StC. T., etc., No. 126."—"Removed on October 25th, 1895, from the right middle meatus of a man, aged 29. Growth was the size of a hazel nut, irregularly ovoid and lobulated, with marked and fairly thick pedicle growing from centre of right cartilaginous septum. Removed with cold snare; free hæmorrhage, checked with cautery. Base freely treated at intervals with the galvano-cautery, and also (thinking that the cautery might produce too much reaction) with chromic acid. Recurrence took place, and after leaving the stump entirely alone for a whole month the recurrence was the size of a nut without its shell. This portion has just been removed, and will also be microscoped. The tumour had had no treatment whatsoever before being removed. The septum was in no way infiltrated; the growth was quite localized, and the opposite nasal fossa was perfectly normal. Since removal three months ago the growth has not tended to attack neighbouring parts. The growth was hardened in corrosive sublimate, embedded in paraffin, and stained with logwood and eosin."—(Signed) STCLAIR THOMSON.

The report of the examination is as follows :—"The specimens submitted to us comprise three sections, each about the size of the transverse section of a pea. Each of them is almost completely surrounded by normal columnar epithelium, beneath which is some loose connective and myxomatous tissue in some parts, whilst in others the epithelium is placed directly on a new growth. This new growth is composed almost entirely of blood-vessels of very different sizes, whose walls are formed of cells, and do not contain either elastic or muscular tissue. The stroma between the vessels consists of loose fibrous tissue, with oval and spindle cells, which are of uniform character throughout and arranged concentrically around the vessels, amongst which there is a good deal of extravasated blood. We consider the tumour to be an angioma."—(Signed on behalf of the Committee) W. R. H. STEWART.

Case of Cyst of Glosso-Epiglottic Fold. Shown by Dr. CLIFFORD BEALE.

The patient, a man, aged thirty-eight, was admitted to Victoria Park Hos-

pital suffering from bronchitis. He stated that for some months past he had been aware of something at the back of his tongue which had slightly affected his voice, but had caused him no other inconvenience. On examination, a swelling the size of a cherry was seen at the back of the tongue, and in contact with the epiglottis, but not attached to it. The walls of the tumour were vascular, and on palpation with a probe the swelling was found to be soft and yielding to the touch, and to be attached to the tongue by a broad base. No local treatment was applied, but the patient was treated by ordinary remedies for his attack of bronchitis, which subsided in about ten days. During this period the swelling had got much smaller, according to the patient's own statement, and on further examination this was found to be the case. The question then arose for decision as to the best means of treatment for its complete destruction, and an expression of opinion was asked as to the respective merits of free incision—excision of a part of the cyst wall—or destruction by galvano-cautery.

Dr. BOND asked if Dr. Beale was sure of the cystic nature of the growth; if such, he would suggest the use of the galvano-cautery and curette.

The PRESIDENT stated that he had usually found a free incision or the use of cutting forceps under cocaine sufficient.

Mr. SYMONDS usually cut off the top of the cyst.

Dr. MCBRIDE had found them most obstinate to cure.

Dr. BEALE, in reply, stated that he had examined most carefully with a probe, and was certain that the tumour was cystic.

Case of Tubercle or Cancer? Shown by Dr. CLIFFORD BEALE.

The patient, who had been previously shown to the Society ("Proceedings," Vol. III. p. 21), had been kept under observation for three months, and had been treated with iodide of potassium and good diet, and latterly, by the advice of Mr. Stewart, with local applications of zinc chloride. The swelling springing from the left ventricle of the larynx had become much less prominent and less angry in appearance. A small amount of thickening of the whole cord remained, but the movements had not been in any way impaired, and no further change had taken place in the small gland in the neck. The patient himself had maintained his weight and general nutrition, but his voice was as weak as before.

Dr. Beale was of opinion that the case was one of chronic tubercular infiltration, and that the disease in the larynx was in all probability following the course of the disease in the lung, which was gradually undergoing the usual fibroid shrinking.

Case of Larvæ in the Nose. Shown by Dr. J. W. BOND.

Case was brought forward owing to the great rarity of the condition in this country.

The patient, a woman, aged forty-nine, had attended the Throat Hospital for some eighteen months for chronic pharyngitis, etc. In May, 1895, she noticed a profuse watery discharge from nose for three weeks, and sharp shooting pains in left frontal region. The discharge was never purulent.

On examination of nose the passages were found patent, and, indeed, the mucous membrane over turbinate a little atrophic. For about six weeks various nose lotions were used without good result. Then, after using a dilute Mandl solution (Mxv in 3j) twice, four grubs came from the nose, and she was relieved. She remained quite well for another two weeks, during which she attended the hospital.

The grubs were segmented, somewhat stained by the iodine. Some of them developed into flies, which, on examination by Mr. Charles O. Waterhouse, of the Natural History Museum, were pronounced to be *Piophilæ casei* (Linnæus), the larvæ of which are said to feed on cheese, bacon fat, and animal matter generally.

There was no particular smell noticed likely to attract the fly. The case seems to have been very readily cured, no doubt because the accessory sinuses were not invaded.

Mr. SPENCER would like to know if there had been any dogs about the patient, and whether this form occurred in dogs.

Dr. BOND had no information as to dogs. Had never come across any record of a case of this description before.

Specimen of Myxoma of Larynx. Shown by Dr. BOND.

The patient, a man, aged fifty, gave a history of attacks of huskiness and loss of voice for twenty years.

Twelve months ago voice almost went, and on examining the larynx on January 15th last a growth about the size of a pea was seen to occupy the upper surface and edge of the middle of the right vocal cord. It was transparent in the centre, and had a cyst-like appearance. On February 15th it was removed by the endo-laryngeal method, since when the voice has wonderfully improved, and patient states that it is better than for the past ten years.

The growth removed was jelly-like. Microscopically it seems to be a pure myxoma.

Dr. Bond directed attention to the long history in the case. No doubt the man may have had chronic laryngitis for some years. It was common to find some myxoma in a laryngeal tumour, but a pure myxoma was very rare. He thought it possible there may have been some growth for a long time, and that a pure myxoma was here, owing to the time which such growth has had to undergo change.

The PRESIDENT said that with Dr. StClair Thomson's case and one they had a few meetings ago, there had been shown at the Society in a comparatively short space of time three cases, whilst up till quite recently only six cases had been recorded. He thought, too, it was remarkable that in each case there was a history of trouble of nearly twenty years' standing.

Dr. LAMBERT LACK said he had one such case this year, and one mixed with a slight amount of fibrous tissue last year.

Dr. KANTHACK stated that he began examining these cases some years ago. He thought that most of them were more myxomatous degeneration, which was comparatively common, than pure myxomata, which was extremely rare. He suggested that the growths should be

sent to the Morbid Growths Committee. [This it was resolved should be done.]

Case of Myxoma of Vocal Cord. Shown by Dr. STCLAIR THOMSON.

Marion J., aged thirty-eight, had taught since the age of seventeen, but always in private schools, the number in her class never at any time exceeding twelve. She used to sing, but the voice had been "thick" for a year past, and for the last twelve months she had given up attempting to sing. For three months she had suffered from hoarseness and partial loss of voice, especially after using it much. A spherical growth, about the size of a small pin's head, smooth, red, and pedunculated, was found projecting into the glottic space at the junction of the middle and anterior thirds of the right vocal cord. There was some infection and thickening of the adjoining upper surface of the cord, and impaired approximation of the cords in phonation. The growth was removed with Mackenzie's antero-posterior forceps, and sections showed that it was a myxoma—unless, indeed, it should be regarded as simply œdematous mucous membrane. In 1880 Morell Mackenzie spoke of myxoma of the vocal cords as "very rare," and said that he had only met with a single case ("Diseases of the Throat and Nose," Vol. I., page 306). It was therefore noteworthy that this growth was removed on the same afternoon as the one already referred to by Dr. Bond. Both cases occurred at the Throat Hospital, Golden Square, in the clinic of Dr. Bond, to whom he was indebted for kind permission to show this one.

Case of a Growth on the Hard Palate of a Girl. Shown by Mr. L. LAWRENCE.

A girl, aged eleven, showed a flat, warty-looking growth growing from the mucous membrane of the hard palate, attached by a thin pedicle in the centre; patient is unaware of the length of time she has had it.

Mr. SYMONDS stated that he had a case of small tumour of the soft palate, which had turned out to be a dermoid.

Dr. PEGLER said that Dr. Whistler had told him of a poodle that he had seen that had three small tumours on the hard palate.

Specimen of Growth Removed from the Naso-Pharynx. Shown by Mr. L. LAWRENCE.

This was removed from a case shown before the Society at the end of last year. The growth was an ordinary mucous polypus without cysts. It had been removed by forceps from behind.

Case of Elongated Cervical Sinus, resembling a Branchial Fistula. Shown by Dr. DUNDAS GRANT.

The patient is a girl, aged nineteen, first seen in October, 1895, complaining of an inflamed swelling in the neck. This was a fluctuating, thinly-covered swelling at the lower end of the anterior margin of the right sterno-mastoid muscle, of about the size of half an ordinary child's marble. To its inner side was another smaller though similar swelling, with which it communicated. There was an enlarged gland near the angle of the jaws, and a firm cord could be felt

running from the lower swelling close up to this gland. The lower swellings were both incised, pus evacuated, and the lining scraped. A drainage tube was passed through both openings. In a few days this was removed, and the patient went home. At present the inner of the two openings is represented by a firmly healed dimple, the outer one by an orifice leading into the cord before observed. A fine celluloid bougie can be passed up the interior of this for a distance of nearly two inches, where it abruptly stops.

The sinus is probably the result of a gland abscess, but its position and character somewhat suggest a branchiogenic origin.

After-History of the Case of Carcinoma Laryngis previously shown at the January Meeting. Shown by Dr. DUNDAS GRANT.

Death took place twenty days after the operation of thyrotomy. The patient was never able to swallow, and nutrition was kept up with apparent good result by means of enemata for a week. The patient then got into a condition of mental wandering and drowsiness. The iodoform was given up, and bismuth and boracic acid employed, but no difference took place. Free stimulation and stomach feeding were then practised, but the mental condition became gradually worse, coughing ceased entirely, and after death the lungs were found congested and œdematus, but free from pneumonic consolidation. Laryngoscopic examination, about a week after the operation, showed that the left half of the larynx was quite inactive, and it will be seen from the notes of the case previously given that one of his primary symptoms was a difficulty in swallowing liquids. There was no fistula to account for this, and it would be interesting to know whether this symptom may in general be regarded as unfavourable. There was ample evidence of regrowth round the site of operation.

Case of Chronic Hoarseness in a Patient with Chronic Rhinitis and Pharyngitis. Shown by Mr. SPENCER.

A maidservant, aged nineteen, has been hoarse as long as she can remember. Formerly she had suffered from nasal obstruction, but did not now complain of the nose. She has never been aphonic except once or twice when she had a cold. On examination there is chronic dry rhinitis and pharyngitis, with crusts. The larynx can be well seen, as well as the trachea. The vocal cords come together, but fail to become tense. At the moment of adduction there are irregular bulgings. The patient was exhibited as a contribution of the relation between chronic nasal obstruction and the larynx.

Dr. CLIFFORD BEALE thought there was enough in the larynx to account for hoarseness without going to the nose for an explanation. He thought local stimulation might bring the voice back.

Dr. MCBRIDE noticed that there was a certain amount of abductor paresis of the left vocal cord, which was also much congested. He did not think the case was functional, but would look upon it with great suspicion.

Dr. TILLEY had also noticed that there was less movement of the left vocal cord than the right.

Mr. SYMONDS thought the chief complaint was in the nose. He would treat the nose and leave the larynx alone.

Dr. SCANES SPICER thoroughly supported Mr. Symonds' views.

Mr. LAKE considered that if the laryngeal congestion had been of recent origin it would get well if the nose was treated alone, but in this case the congestion was chronic.

The PRESIDENT said that the history of this case showed hoarseness from birth, with dryness of pharynx and larynx. There was some abductor paralysis of the left cord. He hoped Mr. Spencer would give a further history of the case, and would adopt one of two methods in the treatment of the case—either treat the larynx and leave the nose alone, or *vice versa*.

Mr. SPENCER said he would treat the larynx first, and leave the nose alone for a time.

Case of Pharyngeal Tumour, probably Syphilitic. Shown by Dr. H. TILLEY.

A woman, aged thirty-three, came to the hospital on February 25th, 1896, complaining of a "stifling sensation in the throat," which was worse at night. She noticed the trouble first early in January.

She has had syphilis. Had two miscarriages; has two children, the younger having been treated for congenital syphilis.

On examination, February 25th, 1896, there is a large ovoid swelling on the posterior wall of the pharynx, rather low down, and about opposite the epiglottis. The larynx could not be seen. On examining her again, March 10th, after she had been on anti-syphilitic treatment for a fortnight, the swelling was considerably smaller, and the larynx could then be seen.

Case of Tuberculosis of the Nose. Shown by Dr. W. HILL.

The specimen was referred to the Morbid Growths Committee.

Case of Lupus of Palate and Larynx. Shown by Mr. E. C. STARR.

Dr. McBRIDE asked what was the prognosis in these cases. He had a number of cases in which the prognosis was most favourable. He used the galvano-cautery and chromic acid.

The PRESIDENT stated that where the parts were easily accessible he preferred scraping and the application of strong lactic acid. When the disease was situated in the larynx he would not use the scraping from fear of stenosis following. He had treated some of his cases with simply giving arsenic and cod-liver oil, no local remedy being used.

Mr. W. R. H. STEWART mentioned that he had a case now under his care that was getting well under the administration of arsenic alone.

Case of Tumour of the Soft Palate. Shown by Mr. E. C. STARR.

SOCIÉTÉ BELGE D'OTOLOGIE ET DE LARYNGOLOGIE.

Meeting, February 23rd, 1896.

President—Dr. DELSTANCHE.

BAYER. *A Case of Hard Chancre of the Tonsil.*

A lady, aged twenty-two, consulted me regarding a tonsillitis of at least three weeks' duration, and which had been treated by a doctor by daily cauterization with nitrate of silver. The inflammation and the existence of ulceration appeared to me due to the repeated cauterizations: I therefore recommended a simple palliative and antiseptic treatment. The ulcer cleaned up, but without showing any tendency to cicatrize, whilst the tonsil increased in size. At the same time the glands became inflamed, causing great dysphagia and insomnia.

From these facts I concluded that the ulcer was syphilitic, and commenced mercurial inunction in the peritonsillar region. Improvement resulted. The appearance of a characteristic roseolous rash soon after this left no doubt as to the nature of the affection, which improved rapidly under general treatment.

EEMAN. *A Case of Tracheotomy.*

A fortnight ago I had to perform tracheotomy for the following unusual conditions:—A man, aged fifty, suffered from an attack of gout (his first) in both feet. As this was passing off there arose suddenly pain in the right side of the neck, and rapidly increasing dyspnœa. I found phlebotrombosis of the right jugular, œdema of the right half of the larynx, extremely small glottic chink, dyspnœa intense and dangerous. Tracheotomy rapidly performed. We were successful in recalling the gouty manifestations to the feet by mustard cataplasms: aloës pills given.

The patient is now doing well, the phlebitis gradually disappearing: but prognosis must be very guarded on account of the danger of embolism.

This case may be compared with the not uncommon cases of acute phlebitis in gouty subjects in the saphenous and other large veins. Is it a unique case? So far I have been unable to find another recorded.

EEMAN. *Angina due to Streptococci, treated by Antistreptococcic Serum.*

In a case of angina due to streptococci, occurring in a child of four years old recovering from an eruptive fever, I applied the above treatment. I record the fact because I believe it is the first time this treatment has been used in Belgium. After pointing out the serious nature of these cases, Eeman went on to state that the use of the serum was perfectly successful, and that he intended to use it in future in cases of angina where pure streptococci are found, and to use it mixed with antidiphtheritic serum in cases where there is a mixture of streptococci

and Loeffler's bacilli. At the same time he draws no conclusions from one case.

CHEVAL thought that Eeman exaggerated the dangers of streptococcic anginas; serious cases he considered exceptional.

EEMAN. *Nasal Diphtheria.*

In Zarniko's "Diseases of the Nose" (Berlin, 1894) it is stated that primary diphtheria of the nose remaining localized in the nose is extremely rare—if, indeed, it occurs. For some years I have held the opposite view, and latterly have observed at least half a dozen cases of primary nasal diphtheria not spreading to neighbouring parts. They have been carefully studied, both clinically and bacteriologically, the latter part of the investigation being carried out by my learned colleague, Van Emergen, and his assistant, Sugg.

These cases are peculiar in that they have no effect on the general health, and that their symptoms are those of a cold in the head, with blocking of the nose, much nasal discharge, and sometimes epistaxis. Recovery is spontaneous after a variable time, which may extend to some weeks. My first little patient was brought to me because for some days nasal respiration had appeared to be difficult; no fever; general condition excellent. Nevertheless the thick membranes removed from the septum and fossæ contained Loeffler bacilli. Cultures from these were extremely virulent, killing like the most virulent preparations in the bacteriological laboratory. The other cases were all similar.

The importance of these cases is evident. They must act as centres for the diffusion of diphtheria both at home and at school. One case I treated with Roux's serum, and it appeared to me that its duration was markedly shortened. These cases have been so carefully studied that their genuineness is quite beyond dispute.

In the discussion following this paper Eeman's views were disputed by CAPART.

HENNEBERT. *Temporal Caries. (Anatomical Specimen.)*

I present the right temporal bone of an infant of two and a half years who died of acute enteritis, and who had suffered from a fœtid otorrhœa. Externally there is no sign of affection of the bone; no abscess, and the skin over mastoid and temporal regions is normal. At the autopsy I found necrosis of the tegmen tympani and upper wall of antrum. The meninges in this region were considerably thickened, and covered on their under surface by a caseous mass of the size of a hazel nut. All the retropharyngeal glands were enlarged and caseous, forming a chain that extended down into the mediastinum.

HENNEBERT. *Epithelioma of the Temporal Bone.*

This is a case from Prof. Delstanche's clinic, of a man aged thirty-eight.

When twelve years old he introduced into his left ear a piece of slate-pencil, which was extracted only after detachment of the auricle. Union was not complete, and there remained a fistula in the auriculo-mastoid groove, from which there has been more or less abundant discharge of pus at intervals.

Three months ago violent pains set in about the fistula, and the region around became infiltrated, this infiltration spreading rapidly upwards above the ear. At the same time complete loss of hearing.

The depth of the meatus was filled by a growth discharging pus and bleeding on the slightest touch. Delstanche operated. A horizontal incision six centimètres long, above the auricle, on the infiltrated area, revealed a fungating mass. This was curetted as thoroughly as possible, and left a cavity of the size of a hen's egg. Its inner limit was formed by the meninges (strongly driven inwards); its lower limit was formed by the pyramid of the petrous bone (the upper surface of which was largely destroyed); the other limits were formed by what was left of the squamous portion of the temporal. Histological examination: epithelioma. The point of greatest interest in this case was the complete absence of peripheral symptoms, in spite of the pressure on the meninges. Motion and sensation were normal, also the reflexes. No special symptoms in face or eyes, no alteration in the fundus of the eyes.

DELSTANCHE thought the etiology was interesting. Probably the cancer originated in the lesion produced by the slate-pencil.

ROUSSEAU. *Turbinal Bulla (Cornet Ampullaire). (Anatomical Specimens.)*

I have here a beautiful specimen of the condition of the middle turbinated known as turbinal bulla, first described by Zuckerkandl. You see here the outer wall of the right nasal fossa, the septum having been removed. There are several lesions. The middle turbinated is considerably increased in size, especially at the anterior extremity. Here its measurements are: height 38 millimètres, thickness 18 millimètres, length 50 millimètres; whilst the average normal dimensions are 23 millimètres, 2 to 3 millimètres, and 38 millimètres. The superior and inferior turbinateds are atrophied, and the latter presents a deep depression in which lies the lower edge of the middle turbinated. A similar depression is found in the nasal process of the superior maxillary. The septum was strongly deviated to the left. We may therefore say that the middle turbinated completely filled the right nasal fossa. Mucous membrane normal.

On opening the middle turbinated we find a large ovoid cavity, closed all round. Its long axis (antero-posterior) measures twenty-three millimètres, the vertical and transverse measurements being twenty-eight and fifteen millimètres respectively. The walls are composed of three concentric layers: 1st, internal layer, a delicate membrane of connective tissue in process of organization, containing a large number of embryonic cells (Dr. D'Haenens); 2nd, the middle layer, a bony envelope derived from the bony lamella of the middle turbinated; 3rd, external layer, the normal mucous membrane of the turbinated. The cavity contains neither liquid nor tumour—nothing but air.

The present name for this condition, "cornet ampullaire," leaves out of account the contents of the cavity, and might well be replaced by the name "pneumatic turbinated," or "pneumatic hypertrophy of the turbinated." I have here another specimen, sent by Dr. Hennebert, in

which the contents are not air, but a myxoma; yet the name is the same.

SCHIFFERS objected to the name "pneumatic hypertrophy of the turbinated," because the mucous membrane is normal.

CHEVAL proposed the name "pneumatic cyst of the turbinated."

LAURENT thought that the two cases might be designated similarly; thus:—"osseous aërial cyst" and "osseous myxomatous cyst of the middle turbinated."

CAPART asked what were the symptoms during life? Was there pus?

ROUSSEAU had not seen the case alive, and had no record of the symptoms. He had found no pus *post mortem*.

ROUSSEAU showed a specimen containing the "fourth turbinated" derived from the superior by division. In adults this was present in one out of every three (Zuckerkancl); more frequently according to his own researches. In the new-born it is constant (Moldenhauer), and generally disappears later, during the development of the ethmoid cells.

RUTTEN. *Exostosis of the Right Meatus Auditorius. Removal by means of Gouge. Recovery.*

Osteomata of the auditory meatus appear sometimes as hyperostoses; more rarely are they pedunculated: They are then called "exostoses," or "enostoses" (Rokitansky). In consistence they vary from an ivory hardness to a spongy softness.

The exostosis that I now show you is extremely hard. It measures one and a half centimètres by one centimètre, has the form and size of a cherry-stone, and has scattered over its surface little rounded or flattened prominences which were buried in the carious walls of the meatus. These appeared during the operation to be so many points of attachment, but the real seat of origin was the postero-superior wall. This is the usual position; and as Prof. Politzer showed at the meeting of the Austrian Otological Society in May, 1895, the mastoid process is almost always implicated, being sometimes totally eburnated.

My patient was a man of thirty-eight years, who had never had discharge from the ear, and could only remember that he had once received a blow on the ear in his youth, from which he had suffered for some days. He first consulted me seven years ago for deafness in the right ear, and was much astonished when I made him feel, with his little finger, the hard body obstructing the meatus. He refused operation, although I pointed out the danger that might arise from suppuration at some future date.

Last month he again came to me, complaining of violent pain in the head, and slight fetid discharge from the ear. Hearing quite lost; tuning-fork on vertex referred to right ear. No swelling or tenderness over mastoid. With the gouge and mallet I removed the growth, and then found that the walls of the meatus were necrosed, due to the pressure of the tumour.

The otorrhœa in this case was the result, and not, as is usual, the cause, of the exostosis. This view is supported by the fact that the patient had never had any subjective symptoms in the ear, not even itching; and further by the facts that after removal of the exostosis the hearing was

almost perfectly restored, the osteo-periostitis of the meatus disappeared, there was no implication of the mastoid, and the otorrhœa ceased. After-treatment consisted in continuous irrigation with boracic solution, and later in iodoform dressings.

Arthur J. Hutchison (Trans.).

OXFORD MEDICAL SOCIETY.

Meeting, February 14th, 1896. ("Brit. Med. Journ.," February 29th, 1896.)

President—Prof. BURDON SANDERSON.

Dr. F. A. DIXEY. *Vital Statistics of Diphtheria in London, 1891-95.*

The author pointed out that for some years past the death rate from diphtheria in London had shown a marked increase. With regard to the influence of school attendance, his statistics indicated diminished opportunity for contagion during the holidays, with renewed activity after reopening. In their bearing on the antitoxin treatment the figure showed an increase in the prevalence of the disease, with a considerable diminution in the mortality. It was difficult to escape the conclusion that the late lowering of mortality was due to generalization of the new method of treatment.

Ernest Waggett.

PATHOLOGICAL SOCIETY OF MANCHESTER.

Meeting, February 12th, 1896. ("Brit. Med. Journ.," February 29th, 1896.)

President—H. R. HUTTON, M.B.

Dr. HARING. *A Case of Sarcoma presenting in the Nasal Fossa.*

A case of a female of twenty-six, in whom, four months after removal of a polypus, apparently of ordinarily benign character, the right nasal cavity was found to be blocked by a round-celled fibro-sarcomatous growth. After intranasal operation and repeated curettage during six months, it became necessary to remove the body of the ethmoid by external operation. The apparently benign polypus first noticed was probably produced by irritation on the surrounding tissues by the malignant neoplasm.

Ernest Waggett.

WIENER MEDIZINISCHE CLÜB.

Meeting, February 12th, 1896.

HACK. *A Case of Myxœdema and a Case of Idiocy in Four-year-old Children.* Under thyroid treatment the myxœdema was cured. The case of idiocy improved.

KASSOWITZ has observed a good result by thyroid treatment in a case of cretinism. Of differential diagnostic importance is the increased curvature of the palate in cases of cretinism. This symptom is observed in all cretins, but sometimes also in mentally normal children. *Michael.*

HAMBURGER AERTZLICHER VEREIN.

Meeting, January 28th and February 11th, 1896.

LEMKE. *On Basedow's (Graves') Disease.* The author believes that tremor and delirium cordis are the most important and earliest symptoms of the disease. He has observed two cases with these symptoms in which exophthalmos and struma appeared later. He believes that the disease is a form of intoxication produced by the secretion of the thyroid, and that the poison has a specific relation to the muscles. Thyrectomy is the best treatment. The author has performed it seventeen times.

PELTESOHN and SANGER. *Some Cases of Graves' Disease.*

KUMMELL does not believe that the secretion from simple hypertrophy causes the disease, but that from a pathologically changed gland does.

NORME said that in some well-marked cases tremor is not observed.

FRANKE observed in one case pulsation of the retina.

BOETHGER had observed it in combination with maniacal hallucinations.

HESS believes that the poison has no affinity for the muscles, but for the nerves.

DEUTSCHMANN remarked that the exophthalmos is produced by increased blood supply.

EMMBEN showed Baumann's thyroid reaction.

Michael.

VAUDOISE SOCIETY OF MEDICINE.

February 1st, 1896.

Dr. MERMOD presented the case of a patient operated upon last year for *multiple sinusitis*—double maxillary, right ethmoidal, *left sphenoidal*—and who succumbed to a meningitis after simple exploration of the right frontal sinus made through the nose. For two months the patient had violent attacks of headache, terminating each time in abundant secretion of serous liquid from the nose. Catheterism through the fronto-nasal canal being impossible, it was determined to explore the sinus across the floor by the nose. The sound was pressed slowly from below upwards, and from behind forwards, supported against the septum, and as much as possible forwards, behind the bones of the nose. It was remarked with surprise that the instrument entered easily, without any bony resistance, into what appeared to be a vast cavity, and to a depth of seven and a

half centimètres, measured from the entrance of the naris. There were no consecutive symptoms, only an abundant serous evacuation at night. The attempt was repeated eight days after with a small canula, introduced only six and a half centimètres. Meningo-encephalitis followed, and on the sixth day a large trepanation of the frontal sinus was performed, and it was found that there was a large prolapse of the brain, complete absence of the frontal sinus, and a small opening of communication on the right between the brain and nose. Death followed twenty-four hours after.

At the autopsy meningitis and encephalitis were found, *without any trace of traumatism of the cerebral substance*. There was no trace of right or left sinus in the frontal, and it was only nine millimètres thick. Two millimètres more behind (*i.e.* eleven millimètres from the superior nasal spine), and a centimetre in front of the intact lamina cribrata, was a small opening, through which the sound had penetrated from the nose. Probably this opening had existed before, and through it had flowed the cephalo-rachidian fluid. The sound had passed between the brain and osseous wall. It had been impossible to manœuvre more forwards, proving that with an osseous wall of nine millimètres a sound may penetrate from below upwards without wounding the brain, when this occupies the place of the sinus. If a prudent exploration of the frontal sinus from the nose can lead to such deplorable consequences, it is necessary to reject Schaeffer's method of operation (opening with curette or trocar pushed upwards from the nose). It is always dangerous, for on the living subject we cannot estimate the extent, form, and position of the frontal sinus. Where catheterism of the fronto-nasal canal is impossible. Mermod would always advise exploratory trephining.

R. Norris Wolfenden.

AMERICAN MEDICAL ASSOCIATION.

January 22nd, 1896.

JAMES E. NEWCOMB, M.D., *Chairman.*

SECTION ON LARYNGOLOGY AND RHINOLOGY.

Dr. L. L. MIAL demonstrated a new electrical saw and plane.

Dr. R. C. MYLES presented an instrument (made by Meyrowitz) for operation upon the ethmoid, called the ethmoid clippers, which cuts at right angles to the shank, and is used chiefly for removing the floors of the ethmoid cells.

Presentation of Cases.

Dr. WENDELL C. PHILLIPS said : I wrote to the secretary that I would present two cases, but at the time I wrote I thought the meeting was to have been last Wednesday night. They were private patients from

out of town, and I had detained them several days, and could keep them no longer. One case was a man with unusual mobility of the tongue. The man came to be treated for nasal obstruction, and remarked that his turbinated bones were swollen, for he could feel them with his tongue. On examination it was found that he could put his tongue into the posterior nares so that it could be easily seen from the anterior nares.

Dr. C. C. RICE said he had seen two cases where it was the custom to clean the posterior nares with the tongue. And Drs. I. H. HANCE and L. C. COFFIN reported that they had seen similar cases.

Dr. PHILLIPS had often seen patients who could clean the posterior nares with the tongue, but never before had seen one where the tongue could be seen through the anterior nares, and who could by this means discover the condition of the turbinated bones.

Dr. MEIERHOF presented a patient, a Russian, who came to him on account of hoarseness. In the pharynx there was an area covered by a thick exudate forming something of a greyish patch. He could find nothing in literature that seemed to correspond to the condition present. The exudate was between five and seven millimètres deep.

Dr. J. WRIGHT said: I do not know what is the matter, but it looks as though it might be an exudate from an inflammatory growth, which may be tubercular or syphilitic.

Empyema of Maxillary Sinus.

Dr. T. J. HARRIS: I present this case as one belonging to a common type, yet interesting to the rhinologist. It is a case of empyema of the maxillary sinus, right side. The case was referred to me from the nervous department of the Manhattan Eye and Ear Hospital, where he had been treated for severe facial neuralgia. Although there was no sign of disease in the nose, flushings of the sinus through the natural passage brought away pus. As a confirmatory measure, an exploratory opening was made with a Hartner's trocar into the sinus, through the alveolus. The free flow of pus was established and the pain ceased. Curettement with a Myles curette, once repeated; this caused entire cessation of all discharge for six weeks, and the patient will be discharged. The duration of the disease was about a year.

Dr. MYLES said there were many cases in which there was a sac of pus beneath the periosteum, and in this instance it was probable Dr. Harris was fortunate enough to strike it. Curetting was often serviceable, but it required care, for the mucous membrane might be seriously injured.

Dr. WRIGHT: These cases are often peculiar and surprising. Not long ago a case came to me complaining of acute attacks for several years. Finally the discharge persisted for six months and was very foul. He objected to the supra-alveolar operation, and after several ineffectual attempts to work out the antrum through the hiatus semilunaris, I told him it was a loss of time and that I would not continue the treatment. He then went to Dr. Simpson, who gave him the same advice, but succeeded in making the opening of the ostium maxillare larger and washed

the antrum out through the nose : but told him it would probably be of no avail. He then induced his family physician in the country to continue the treatment. In about three weeks he was cured.

Dr. O. B. DOUGLAS said : Last summer, while in the country, not having suitable instruments with me for the operation, I improvised an instrument, somewhat like a carpenter's bradawl, to perforate the maxillary sinus from the canine fossa. An ingenious dentist made for me a silver tube that the patient could wear, and, after washing out the cavity with dilute peroxide of hydrogen, the patient was greatly relieved and subsequently recovered, as I understand.

Dr. R. C. MYLES presented a case. About five years before the patient began to be annoyed by discharges from the right nostril, and with pains in the same side of the head, which gradually grew worse. I found polypoid degeneration of the right ethmoid, with muco-pus issuing from the right antrum, sphenoidal, ethmoidal and frontal sinuses. There was an opening through the socket of the second molar tooth into the right antrum, which I enlarged by removing the lower outer wall of the antrum, curetted the cavity, and removed granulation tissue, pus, and necrotic bone. I removed the middle turbinated bone and a number of polypi from the middle meatus, irrigated the frontal sinus and the antrum of Highmore on several occasions. There was only slight improvement. The patient later grew worse, and on December 30 I opened the frontal sinus externally, and found pus and a thickened, greyish, polypoid membrane, which protruded through the opening during the chiselling. The cavity was carefully curetted and packed with iodoform gauze. The patient now has mild attacks of headache at times, but not frequently, which seem to arise from the soreness due to the incision. Most of the interior surface of the sinus can be observed, the lining of which is gradually becoming healthier and hardened.

Dr. O. B. DOUGLAS : I remember a similar condition in a patient who applied at the Manhattan Eye and Ear Hospital, Throat Department, some fourteen years ago. It was seen and diagnosed by Dr. Andrew H. Smith as empyema of the sphenoidal sinus, and various attempts were made to relieve the patient's suffering—with poor results, I fear, for we soon lost sight of him. I mention this case, as empyema of the sphenoidal sinus has been spoken of as something new. It is certainly rare.

Dr. HARRIS asked if in examining the antrum with the electric light the line of opacity was looked for just below the eye only, or lower down.

Dr. PHILLIPS : I have just asked Dr. Harris concerning the area of opacity in his case. I find that many observers look for the dark area too low down upon the external surface of the antrum. I pay but little attention to this locality, but always look for a dark area underneath the eye of the affected side. Only yesterday an obscure case of antrum disease was sent to me, with a history of having a free discharge from one side of the nose from about nine to twelve a.m. daily. There was slight tenderness upon percussion over the antrum upon the same side. The transillumination lamp showed darkness underneath the eye and of the pupil upon the affected side, and a brilliant light through both on the opposite side. Transillumination was a most valuable adjunct in the

diagnosis of this obscure case. I should not rely upon it except as an aid in verifying a partial diagnosis previously made.

Dr. RICE said : I have seen the dark shadow appear lower on the face, producing an opacity of the entire cheek. The shadow depends upon the intensity of the light.

Dr. DOUGLAS asked if the spots of opacity lower down might not be due to a difference in the thickness of the bone.

Dr. WRIGHT said that the electric light, while it amused the patient, was an unreliable method of diagnosis.

Dr. MYLES said : I think the electric light is often very serviceable as corroborating evidence, and sometimes leads to exploration with the trocar, which in turn leads to a diagnosis. The light should not be too powerful. The lower line of opacity is often caused by the absence of reflected light through the antrum.

In what Manner can Ulcerations on the Nasal Septum, following Operation, and in Atrophic Rhinitis, be Healed to Secure an Even and Moist Surface ?

Dr. C. C. RICE : We all know how important it is to secure a cicatricial surface which will not accumulate secretions ; for the hardened secretions are not only annoying, but cause secondary ulcerations.

For convenience we may classify ulcers of the nasal septum into two large divisions : first, those following operations ; and, second, those appearing as the result of some of the varieties of inflammation of the nasal passage. Perhaps it is as well to exclude from these the ulcers of syphilis, lupus, and tuberculosis, as these largely require constitutional treatment.

Ulcers from operation will heal much quicker in a moist hypertrophic condition than in an atrophic one, and the chief difficulty lies in treating cases where the septum is dry, atrophied, and presents irregularity of surface. Ulcers behave differently in different methods of reducing the thickness of the nasal septum, and I think the use of the galvano-cautery upon the nasal septum should not be encouraged. In some cases the cautery may be used instead of mineral acids to remove oedematous, boggy conditions of the septum ; but tissues are removed much more scientifically by some method of excision.

After operation on the septum the bleeding usually stops spontaneously without plugging, and I make it a rule to have the patient blow his nose thoroughly to remove any pieces of tissue or any foreign body, and then I cover the wound with boracic acid and compound stearate of zinc. It is not well to wash out the nose by post-nasal irrigation until the second or third day after the operation. In treating operation ulcers the first week I instruct patients to return the second or third day after operation ; but in some cases where they do not return for ten days it is surprising to see how well the healing of the ulcer has progressed, even in cases where there has been not even washing. In atrophic cases these ulcers will not do so well, but in healthy mucous surfaces it is a question if the healing will not progress as favourably by simply cleansing, and without applications of any kind. It is not possible

to cleanse the part without removing the scab, and this is a constant irritation.

I believe there is a greater tendency for the ulceration to deepen after using the galvano-cautery than after excision, and they require more diligent treatment to prevent perforation. In some cases after operation we may be forced to remove granulation tissue many times to get breathing-space. The most important thing is to get a cicatrix that is not only smooth but moist. I believe the application of the galvano-cautery and mineral acids tend to form thicker and dryer cicatrices. Aside from cleansing, ulcerations should be handled as little as possible until the surface is even with the surrounding tissues, and then much can be done by friction with certain mild disinfectants to remove the granular surface of the ulcer and make it hard, slippery, and moist.

Ulcers in atrophic rhinitis are very common, and patients are annoyed with the accumulation of scabby secretions upon the nasal septum and oft-recurring nose-bleed. Post-nasal irrigation, with Seiler's solution, or with some stronger disinfectant, and oiling, need to be employed as simple measures. It is necessary to level all small prominences on the nasal septum, and to prevent the accumulation of secretions. A good while ago I found I got better results by rubbing the ulcerations thoroughly with a disinfectant than by the coaxing treatment of nitrate or silver. I introduced a cotton-carrier, and, with a small hard pledget of cotton moistened with listerine, rubbed the ulcerations rather forcibly for several seconds at a time. At first there was bleeding from the ulcer, but this soon stopped; and not only the ulcer, but the surrounding tissues, seemed to take on a healthier condition, which resulted in quick healing. I now use borolyptol more than anything else, and with better results. By polishing the surface with antiseptic friction every two or three days for two or three weeks a whiter cicatrix, and one which is smoother and more moist than the usual cicatrix, is secured. In atrophic rhinitis small prominences on the septum can be rubbed down in this way alone. I have found it possible, too, to exhaust certain forms of nervous irritability of the nostril by this method. I believe it is possible to overcome the hypersensitiveness of peripheral nerve filaments in this way, and to control many of the vaso-motor disturbances which are frequently seen in the nostril.

Dr. MAYER: The occurrence of post-operative ulceration on the septum is of such frequency that I think Dr. Rice's paper might well be entitled "A Plea for Less Indiscriminate Operation by Saw, Trephine, or Knife." If more care were taken of the mucous membrane, ulcers of this nature would not result. As an illustration, I operated recently by dissecting back the mucous membrane, removing the enchondroses, suturing the membrane back in its place, with good result.

In cases of ulceration with epistaxis I stick to nitrate of silver, which, if used in appropriate strength, is always satisfactory.

Dr. PHILLIPS: I find more ulcers from adults picking their noses than from operations. I have not found it necessary for several years to use the galvanic cautery upon the septum, for a growth not large enough to be removed by the saw or trephine is not large enough to remove

at all. I will now speak of the patient I expected to have present this evening. He is the son of a physician, and suffered from a slight exostosis of the septum, with ulceration. His father, unfortunately, sprayed it a few times with cocaine, and the young man afterwards formed the cocaine habit, and for a year or two used it almost continuously, but for some months had not used it. I had him quit picking his nose with the finger: had him clean the nostril thoroughly several times a day with hot water: applied nitrate of silver, thirty grains to the ounce, three times a week; gave him ichthyol to use whenever he was conscious of obstruction: and now he is not suffering. I regard it as important to keep the patient from picking the nose. The cases without operation are the ones I generally find so obstinate. I find ichthyol the best treatment, and sometimes use it pure; sometimes with glycerine, two drachms to the ounce.

Dr. O. B. DOUGLAS: I should like to have the Fellows of the section try fluid extract of calendula for ulcerations of the septum. I apply it in the form of an ointment, two drachms to the ounce, of equal parts lanolin and albolene.

Dr. RICE said that it was not difficult to get the ulcers to heal on the septum. The annoying point is to have the patient keep returning with the same scabby secretions on the same part of the septum. The point is to get the mucous membrane smooth, so that secretions will not accumulate.

T. P. Berens.

PATHOLOGICAL SOCIETY OF TORONTO.

("Canadian Practitioner," January, 1896.)

President—Dr. CAURTH.

Dr. ANDERSON showed a temporal bone, with pus in the middle ear, from a woman of forty-one, in whom maniacal symptoms, followed by depression and coma, had preceded death. The organs showed the usual signs of septicæmia.

Dr. AMYOT and Dr. THORBURN showed two specimens of rhinoliths, with a button and a knife point respectively as a nucleus.

Dr. AMYOT showed a specimen of cut throat, which led to a discussion on the functions of the epiglottis.

Ernest Waggett.

**SOCIÉTÉ DE LARYNGOLOGIE, D'OTOLOGIE, ET DE
RHINOLOGIE DE PARIS.**

January 10th, 1896.

("Arch. Internat. de Laryng., d'Otol., et de Rhin.," Jan. and Feb., 1896.)

Présidence de MM. MÉNIÈRE et LUC.

COURTADE. *Modification of the Operative Technique of the Perforation of the Mastoid Apophysis.*

This is an instrument by means of which the seat of election for perforation may be determined. It consists of a spatula, of which the extremity is narrowed to form a beak three millimètres long and of the same breadth. At the base of this beak the spatula is nine millimètres broad. After the usual incision the instrument is inserted between the soft tissues and the posterior wall of the bony meatus. Thus inserted, it acts not only as a hæmostatic and a retractor, but also indicates the limits in which perforation may safely be made. Such limits correspond in the adult to the whole breadth of the spatula, while in infants a median crest indicates the spot for perforation.

LUBET-BARBON considered that the spina-supra-meatum was a sufficiently accessible guide, and that detachment of the wall of the meatus was unnecessary.

CHATELLIER had at one time made use of a guide of a nature similar to that described.

COURTADE. *Measurements of the Distance of the Pharyngeal Opening of the Eustachian Tube from the Anterior Orifice of the Nose; Clinical Deductions.*

A number of measurements were taken from the posterior border of the anterior nares, with the result that the variation in the figures proved so great (63—76 millimètres, female; 67—82 millimètres, male) that the author considers that they can supply no useful information with regard to catheterization.

GELLÉ said that the Eustachian orifice was situated on the same transverse plane as the transverse root of the zygomatic apophysis. The distance between the anterior inferior nasal spine and the tubercle of the zygomatic apophysis gave an exact indication for the introduction of the catheter.

MÉNIÈRE had found the mean distance in one hundred and seventy instances to be seven and a half centimètres.

MENDEL read a communication (which will be published *in extenso*) on the question of the *Inflammatory Origin of Laryngeal Polyfi.*

RUAULT has frequently seen singers' nodules disappear without any treatment beyond simple rest; but other forms, firm, and characterized

by a small tumour composed of sub-epithelial structures, did not disappear without intervention. With regard to the general etiology of these polypi, he drew particular attention to the rôle played by syphilis. Old syphilitics who had had secondary laryngitis were very frequently affected with polypi (fibroma, with epithelial thickening), situated on the free edges of the vocal cords in their anterior third.

CHATELLIER believed that all the tumours of the vocal cords were due to trophic disorders of normal tissues, leading to cellular proliferation. The character of the polypi varied with the tissue element involved. A simple or specific inflammation might account for the trophic disturbance.

LUC considered that the practical interest of the communication lay in the proof given that small sessile tumours of the cord were amenable to cure by nothing more than rest; and, inasmuch as difficulty of removal was inversely proportionate to the size of the tumour, no surgical interference should be undertaken in these cases until rest had been tried and failed.

JOUSLAIN. *Remarks on Tertiary Syphilis of the Nose.*

The case of a lady was related who appeared in January, 1895, to be affected with simple hypertrophic rhinitis. The condition failed, however, to yield permanently to cauterization and antiseptic douches, and in July she returned with extensive necrosis of the septum and walls of the nasal cavities. The septum was perforated, and the turbinates necrosed and denuded. The author had previously described the sequel to a case of syphilitic necrosis of the inferior turbinate, in which the patient, neglecting his treatment, became affected with gumma in the brain. In conclusion, he remarked that nasal syphilis was not only a serious malady in itself, but often indicated a predisposition and possibly the commencement of manifestations in deeper structures.

LUBET-BARBON did not hesitate to prescribe potassium iodide whenever he met with necrosis of the turbinates, believing, as he did, that all cases were syphilitic.

RUAULT had four or five times seen necrosis of the anterior and inferior portions of the middle turbinate caused simply by a fall on the face.

MÉNIÈRE. *Two Instances of Tympanic Membrane ruptured by Indirect Cause.* (To be published in extenso.)

Two such cases were related. In the first the rupture was due to a shock to the head. The second was that of a railway employé implicated in the accident at the Montparnasse Station. The rupture was followed by acute otitis media and periostitis of the mentus. *Ernest Waggett.*

VIENNA LARYNGOLOGICAL SOCIETY.

Meeting, November 7th, 1895.

PANZER showed a patient with *Emphysema of Highmore's Antrum, of the Ethmoidal Cells, and of the Frontal Sinus.* Highmore's antrum

was treated through the alveolar process and irrigation ; the ethmoidal bone by curettage ; the frontal sinus was opened and curetted. These affections were consequences of influenza. The patient now, three months after the beginning of the treatment, is nearly cured.

STOERK referred to a case of *Empyema of the Frontal Bone* cured by extirpation of the middle concha and irrigation.

CHIARI reported on seventeen cases of *Nasal Polypi*. Retronasal polypi are treated by the cold snare or by forceps.

RETHI has operated on three cases of *Retronasal Polypi* by means of a hook introduced into the nasal cavity.

RETHI. *A Handle for Galvano-Cautery.*

Michael.

Meeting, December 5th, 1895.

ROSCHIER showed a patient with *Traumatic Hæmatoma of the Right Pyriform Sinus*. External examination showed no abnormality, except that the right upper part of the thyroid cartilage was sensitive on pressure. The laryngoscope showed a red tumour, and digital examination abnormal mobility of the right cornu of the thyroid cartilage. From this the author believed that this cornu was fractured.

EBSTEIN showed a case of *Malignant Syphilis*. In spite of energetic antisyphilitic treatment, beginning one month after the primary infection, the whole osseous nose had necrosed.

EBSTEIN. A case of *Oedematous Swelling* in the region of the process vocalis caused by salicylic acid. (Will be published *in extenso*.)

RETHI showed a *Snare for Amputation of the Anterior Hypertrophic Ends of the Turbinates*.

BIENENSTOCK. *Statistics of Nasal Diseases*. (Will be published *in extenso*.)

Michael.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

October 18th, 1895.

President—Dr. W. L. REED.

MIDDLETON showed the following cases :—

1. *Bilateral Facial Paralysis with Absolute Deafness*. A soldier, in India since 1891, had various Indian diseases and syphilis. In January, 1894, had a swelling of scalp, which spread over head and face. In February, 1894, enteric fever ; on regaining consciousness, face was paralyzed. In June had "slow fever" ; at the beginning of illness suddenly became deaf. Both facial and auditory nerves affected, other cranial nerves escaped.

2. Woman with old-standing *Left Facial Paralysis*, now presenting contracture and secondary over-action. The onset—about two months

after abortion—was sudden, accompanied by headache and vomiting, with tenderness over left mastoid.

3. Woman with *Bulbar Paralysis, etc.* Illness began with hoarseness and indistinctness of speech, difficulty in swallowing, and dribbling of saliva.
A. J. Hutchison.

MEDICAL SOCIETY OF GENEVA.

September 4th, 1895.

Dr. ED. MARTIN presented a child treated for *Angioma of the Ear*. After thirty sittings of electrolysis the tumour had notably diminished.

November 6th, 1895.

Dr. HALTENKOFF presented two patients operated upon for *Empyema of the Frontal Sinus* following upon influenza.

1. The patient presented small central scotoma for colours, without the least alteration of the fundus (ophthalmoscopic). He had had lancinating pains in the forehead after influenza (January, 1890), which had increased in intensity. There was muco-purulent discharge from the nares and tumefaction over the eyebrows. The opening of the maxillary sinuses led to discharge of flaky pus, but without relief to the symptoms. The frontal sinus was, therefore, trephined, a large communication was established with the nasal cavity by pushing a trocar across the ethmoidal cells, and a drainage tube was inserted. Three weeks after iodoform gauze packing was inserted and changed every day, regular injections of oxycyanide of mercury (one per cent.) or corrosive sublimate (one in two thousand) being continued. Pain diminished and discharge grew less, and the eye symptoms amended. Three months later suppuration was reduced to scarcely anything. The sphenoidal sinus contained only a little pus, and the ethmoidal cells were intact. The fistula was kept open nine months, injections being continued, though less frequently. A platinum canula was worn by the patient, stuffed with gauze. In July last all suppuration ceased, and the fistula was allowed to close.

The cause of the retrobulbar right neuritis was this polysinusitis, and the latent empyema remained unsuspected more than four years.

2. The author's second case presented enormous swelling of the eyelid and antero-inferior exophthalmia of the right eye, caused by periostitis of the upper wall and phlegmon of the orbit, accompanied with continual cephalalgia, etc., following upon influenza in 1890. Radical operation was performed by opening in the anterior median line with chisel and mallet and removal of a rectangular piece of bone. Fungous degeneration being present, the sinus was curetted thoroughly and the naso-frontal canal catheterized from above. A drainage tube was inserted across both

openings into the sinus. Injections of hot oxycyanide of mercury, increasing to one per cent., were performed, and symptoms rapidly amended and the cure was effected. This case once more proves the value of a large anterior opening, permitting of thorough exploration, and its superiority over more timid and less certain methods.

Dr. SULZER : Facial sinusites are more frequently met with by oculists than others on account of the ocular complications. He agreed with Haltenkoff as to the causation of the retrobulbar neuritis.

Dr. SENE presented a patient said to be cured of *Stuttering* by his orthophonic method, which consisted of making patients speak whilst they underwent muscular exercises upon an inclined plane.

December 4th, 1895.

Dr. KUMMER presented a *Cancerous Tongue removed by the Cervical Method*. The right submaxillary gland was also removed.

R. Norris Wolfenden.

BRITISH MEDICAL ASSOCIATION.

Meeting, July, 1895 (continued).

ABSTRACTS OF PAPERS.

A Hitherto Undescribed Form of Rotatory Sensation in Labyrinthine Disease. Prof. GUYE (Amsterdam).

He had occasion, a few months ago, to show before a medical society in Amsterdam a patient suffering from Ménière's disease who presented a peculiar form of rotatory sensation which was not quite new to him, as he had observed the same, some years ago, in a small number of patients, but which had not yet been described. The patient, a man aged forty-seven, had suffered from influenza four years ago, but had not complained of his ears at the time. Since then he had enjoyed good health. He was often exposed to cold. For the last two months he had had a ringing in his left ear, and suddenly he had, in July of last year, an attack of giddiness, when he fell down and vomited. This attack returned at first twice daily, and later on at intervals of from ten to fourteen days. When Prof. Guye showed the case he had lain in the hospital for four weeks, and had still, now and then, an attack, mostly without vomiting. He heard the watch at two millimètres in the right ear, not at all in the left. His was a typical case of Ménière's disease. He had also symptoms of labyrinthine disease in his left ear, giddiness, rotatory sensation in the direction of the diseased ear, vomiting, and deafness. There was no symptom of any middle-ear disease. With the first attack objects

appeared turning round as a wheel, or as the hands of a clock, and in the direction of the hands. When that had lasted for some time he suddenly saw everything turning away to the right; then came sickness, vomiting, and, if he did not lie down soon, he would fall. The rotatory sensations in Ménière's disease were, as a rule, of two forms. Mostly patients had the sensation of rotation to the right, or to the left round a vertical axis, and, as Dr. George had shown in 1879, to the right when the right ear and to the left when the left ear was the diseased one. When the sensation was very sudden it might produce a reflex movement of rotation in the opposite direction. Some patients had, with the rotatory sensation to the right, the idea that the surrounding objects turned to the left. This was usually the case when the attack was severe. When the sensation was not so sudden and lasted a little longer they had the idea that the objects were turning in the same direction as their own head.

It was rather remarkable that when they had slight fits, accompanied by uncertain gait in walking, they felt more propensity to fall to the side of the diseased ear than to the other side. The slight rotatory sensation in one direction produced the idea of rotation in that direction, which led to an involuntary, though not unconscious, movement in the same direction. When, on the contrary, the rotatory sensation was strong and sudden, it produced a reflex unconscious movement in the opposite direction. This seemed to Prof. Guye to be worthy of notice in the interpretation of experiences in animals where there was no other sign of the sensations than the movements induced by them. These rotatory sensations round a vertical axis might very plausibly be accounted for by irritation of the ampullæ of the horizontal canals. Besides this rotatory sensation round a vertical axis, patients generally described rotatory sensations forward and backward, as if they were turning over; and in some particular cases they described the sensation as if the objects did turn round before their face with the movement of a wheel or of the hands of a clock. If an explanation of these sensations was to be looked for in the theory of the functions of the semicircular canals, it must be remembered that the two vertical canals, which were sometimes called the frontal and the sagittal, but were better denominated as the superior and posterior canals, could, according to the theory of Crum Brown, afford rotatory sensations round two axes which are about perpendicular to each other and to the vertical. The planes of these canals did not cut the horizontal plane in the sagittal or frontal but in a diagonal direction. The superior canal of the left ear corresponded to an axis going through the right eye and the left mastoid process. In a plane parallel to the canal lay the posterior canal of the right ear. The axis corresponding to the superior canal of the right ear and to the posterior of the left ear ran through the left eye and the right mastoid process. Slight rotatory sensation in these two pairs of co-ordinated canals could produce the impression that objects were turning as the hands of a clock, the dial of which must be thought of as standing before the patient more to the right or to the left. More violent rotatory sensation originating in one of these canals would produce the sensation of falling forwards or backwards, and of turning round about an axis which did not lie transversely, but a

little more to the right or to the left. Generally such patients felt so giddy that it was not easy for them to make accurate observations. But some patients were intelligent enough to make reliable observations, especially when their attention had been directed to the question beforehand.

Dr. Guye thought it was important to make a note of their impressions, and, if possible, to compare them with the state of the internal ear as found *post mortem*. He thought this especially important on account of the theories of some French writers, as Pengnier and Tournier, who considered Mènière's disease as a neurosis occurring in mental degeneration, and the cause of which could not be found or should not be sought in the ears, but in the brain; and on account of the theories of some German writers, as Boettcher and others, who looked on the static troubles produced in experiments on the semicircular canals as caused by lesions of the brain. Dr. Guye wished to draw attention to this new rotatory sensation, in the first place, to inquire if it had been already noticed, and, if not, to beg that it should be looked out for in future. It must not be forgotten that man alone could describe his sensations, and that in vivisections conclusions could only be drawn from reflex movements.

Notes on Five Cases of Disease of Attic treated by Modified Stacke's Operation. Dr. A. BRONNER (Bradford).

In many cases of chronic purulent otitis media we find it impossible by ordinary methods of treatment to cure the disease and stop the discharge. This is a sign that the attic or the mastoid antrum, or both, are affected. We can, therefore, not hope to effect a cure till these parts have been exposed and treated. The same applies to the cases of perforation of Shrapnell's membrane. These are fairly common, but often overlooked, as the subjective and objective symptoms may be extremely slight. It is difficult to explain why, in some cases, the disease remains confined to the middle ear, in others it spreads into the attic, and yet in others into the mastoid antrum. The nature of the poison (scarlet fever, influenza, etc.) may partly be the cause, or the constitution of the patient (tuberculous, syphilitic, etc.); but in many cases the anatomy of the parts has a great deal to do with the extension of the disease. Hartmann and others have shown how the number, size, and position of the mastoid cells vary in nearly every case, and how different is the size and position of the mastoid antrum. Often we find a number of small cells near to the attic, and there is then naturally a tendency for the disease to spread to these cells, and set up permanent mischief there. If these cells are in connection with other cells, then the mastoid process will most likely also become affected.

When the attic has been laid open we should carefully examine the aditus ad antrum and the neighbouring cells. If we find any carious bone, granulations, or oozing of pus, the antrum should be opened at once. Before opening up the attic from behind the ear we should try and scrape it out from the external meatus, remove any diseased ossicles, etc. With cocaine it is not very painful. I operate according to the method suggested by Stacke, but carry the incision upwards and round the top of

the ear, and pull the whole of the ear forwards and downwards. In some cases it is only necessary to cut through the upper part of the cutaneous external meatus. A bent probe—Stacke's protector is too large and clumsy—is passed into the attic, and the osseous wall, pars epitympanica, separating it from the middle ear, removed with the chisel. Any mastoid cells are now carefully looked for and well scraped with the sharp spoon. If there is the slightest suspicion that the lower cells or the antrum are diseased, I remove the upper and posterior wall of the osseous external meatus, and, if necessary, the greater part of the mastoid process. It is of great importance that a large opening be kept in the skin, so that the operated parts can be watched for some weeks.

The cases which I am briefly recording are those in which there had been disease for some years, and all ordinary methods of treatment had failed to effect a cure, and in which the disease had spread into the attic, but had not extended into the mastoid antrum.

1. Mr. W., aged thirty, has had discharge from right ear as long as he can remember. There have been frequent attacks of pain. Watch was heard at two inches. A small polypus was seen protruding through Shrapnell's membrane. This was cauterized with chromic acid three times in May, 1893. On June 2nd the perforation had healed. In July there was again a small polypus, which disappeared after use of chromic acid. In October the pain was very severe. In November, under chloroform, an examination was made and rough bone found. The malleus and incus were diseased and were removed. There was great improvement until January, 1894, when the pain became very severe and the patient consented to an operation. A large incision was made behind the ear and the cutaneous external meatus cut through. A large number of diseased cells were found near the attic. The pars epitympanica was removed with the chisel, and the cells were scraped out. Wound was kept open for six months. Recovery.

2. Miss P., aged twenty-five, has had attacks of pain in left ear for two or three years, and slight offensive discharge off and on. The attacks are becoming more frequent and more severe. Small perforation of Shrapnell's membrane was seen. In December the opening was enlarged and the diseased incus and malleus removed. In May the pain returned. In July a large incision was made behind and above the ear; the whole of the cutaneous external meatus cut through. The pars epitympanica of the attic was removed and the attic and neighbouring mastoid cells well scraped out. The upper part of wound was kept open for two and a half months. There has been no pain or discharge since. The hearing is slightly worse. Watch can be heard at three inches instead of at five inches.

3. Mrs. S., aged thirty. There has been discharge from right ear as long as she can remember. When I saw her in January, 1894, there had been attacks of severe pain in the ear for two or three months. There was a flat polypus of middle ear, which was removed by the snare and chromic acid. A bent probe could be passed into the attic, and rough bone felt there. The attic was scraped out through the external meatus four times with a small sharp spoon, and much granulation tissue removed. As the pain and discharge did not cease, I opened the attic in

May. There was a very large cavity, which was thoroughly scraped. In three months the wound had healed. The hearing was about the same. Watch heard on contact.

4. Mr. T. saw me in November, 1893. There has been pain of left ear for three to four months, with slight discharge. There was a small perforation of Shrapnell's membrane. In January, 1894, the cavity was gently scraped and washed out. The diseased incus came away. In June a large incision was made behind and above the ear, the pars epitympanica removed, and the enlarged attic well scraped. The fistula healed in four months. The hearing is about the same; watch just heard on contact.

5. Miss S. saw me at Eye and Ear Hospital in October, 1893. There has been discharge from the ear for eight to ten years; never much pain. A large polypus was removed: chromic acid frequently applied and iodoform drops used. There was constant recurrence of the polypus. In February, 1894, the attic was scraped out from the external meatus. In July the attic was exposed; a large number of mastoid cells were scraped out, and the posterior and upper wall of the osseous external meatus removed. In six months the fistula had healed, and there was no more discharge from the ear. The hearing had slightly improved; watch was heard at about two inches instead of one.

These few cases seem to show how important it is that in all cases of chronic purulent otitis media, or of perforation of Shrapnell's membrane, we should carefully examine the attic, and, if necessary, lay it open and remove all diseased bone. In many cases we naturally will find that the mastoid antrum is also affected, and this must then be opened. Before operating we should of course try all the ordinary methods of treatment, enlarging, if necessary, any opening of the membrana tympani, removing any polypi or granulations, and, if possible, also the malleus and incus if these are diseased or loose. These methods suffice in a large number of cases; but if they do not we should at once proceed to open up the attic thoroughly, and operate according to ordinary surgical principles. If this method of treatment were carried out many lives would be saved every year.

On the Vibration of the Vocal Cords. By ALEXANDER HODGKINSON, M.B., B.Sc.

If sand is sprinkled on the surface of a vibrating plate or membrane, it leaves those areas where the vibrations are greatest and passes to those where the vibrations are of less amplitude, finally coming to rest on certain well-defined lines or areas, termed nodal areas, or parts where the vibrations are absent or at a minimum. From the arrangement of the sand, therefore, or the pattern which the sand forms on such plates during their vibration, the change of form which the plate undergoes during such vibration may be inferred. It is the object of my communication to show that the same method may be employed to demonstrate the vibrating and nodal areas of the vocal cords in man, and also to shortly describe some results which have been obtained by its employment in the normal larynx, and also in certain abnormal conditions of the

cords. The following is the method employed :—A powder, consisting of finely-pulverized indigo, is blown into the larynx by means of a curved insufflator, indigo being selected on account of its insolubility, conspicuous colour, and lightness. Whilst insufflating the powder, which should be done with the aid of the laryngoscope, the individual is directed to make an inspiratory sound, in order to abduct the cords and so ensure the distribution of the powder over their whole surface. Though the powder causes little or no irritation as a rule, unless used in needlessly large quantity, it is well to caution the individual against coughing, clearing the throat, or swallowing. If found necessary, however, solution of cocaine in form of a spray may be used.

After insufflation the cords are seen thinly sprinkled with the indigo, and if the individual phonates the effects of the vibrations of the cords on the adherent powder may be observed. These effects are found to vary with the register—chest or falsetto, pitch and loudness of the sound, and on the physical condition of the cords—that is, whether healthy or diseased. One feature common to all cases on the commencement of vibration of the cords is the immediate movement of the particles of indigo from the free edges of the cords in the form of a dark line, such line being at first parallel with the edge of cord, but rapidly becoming convex towards the outer or ventricular side, thus demonstrating the well-known fact that the amplitude of the vibrations of the cords decreases towards their extremities.

In the case of normal cords, and with a chest note of medium pitch, the indigo passes from the free edges of the cords as a convex line, extending in length from the anterior commissure to a point posterior to the vocal process. Powder alone has a tendency to adhere to the cords as its distance from the edges increases, and becoming arrested might lead to the supposition that even with chest tones a nodal line exists parallel to its free edge. This is, however, disproved by the fact that when the cords are healthy and the powder mixed with mucus it passes outwardly until it arrives at the base of the cord. In the case of lower notes the indigo line extends posteriorly further beyond the vocal process and becomes less curved posteriorly, pointing to an increase in the amplitude of vibration of the posterior ends of the cords and the participation of their cartilaginous portions in the vibration.

In the case of chest tones, therefore, the whole cord from edge to base is in a state of vibration, the amplitude of such vibrations being greatest at the central free edge of the cord, and diminishing towards its extremities and base. In the case of falsetto tones the result is different. The powder rapidly forms the wave lines parallel to the edges of the cords, but instead of the lines becoming markedly curved they remain almost parallel to the free edges. On the arrival of the indigo line to near the middle of the cord—that is, at a position intermediate to the edge of the cord and the ventricle—its onward movement becomes arrested, thus forming a dark stationary line parallel with the edge of the cord, excepting at its extremities, whilst the powder on the surface of the cord between this line and the orifice of the ventricle passes into the ventricle. From the above result we see that in the case of falsetto notes, whilst the whole length of the cords vibrate, and with nearly equal

amplitude, the vibrating surface of the cord is divided into two areas by a longitudinal nodal line—one area bounded by the free edge of the cord and the nodal line, the other by the nodal line and the ventricle.

To give some idea of the marked effect of morbid conditions of the cords on the result the following case of paralysis of the abductor muscles of the left side may be cited :—The cord was immovable in the abducted position. Both cords were slightly catarrhal, and the voice low and husky. Indigo was applied, and on phonation in a low tone a dark wave-line of indigo, extending from the anterior commissure to a point considerably in front of the vocal process, formed on the paralyzed cord; whilst on the unaffected cord the dark line extended from the anterior commissure to a point posterior to the vocal process. We thus see that whilst the unaffected cord vibrated throughout its entire length, little more than half the paralyzed cord vibrated. The diagnostic value of the results remains to be tested.

THE FOURTH MEETING OF THE GERMAN OTOLOGICAL SOCIETY, JENA.

June 1st and 2nd, 1895. ("Monatschrift für Ohrenheilkunde.")

Meeting, June 1st.—Morning.

Prof. WALB (Bonn) *in the Chair.*

Dr. HARTMAN (Berlin). *Dehiscences in the Temporal Bone.*

One preparation showed an opening in the tegmen tympani the size of a lentil, filled in with a firm, transparent membrane, smooth both on the upper and the under surface. Three other preparations derived from cases in which the patient had died from the sequelæ of chronic suppuration of the middle ear. In two of them membrane replaced bone in the roof of the antrum, and in the other on the posterior surface of the temporal bone, partly in the groove for the lateral sinus. There was no adhesion of the membrane to the dura mater in any of the cases. In the first case the condition seemed to be a developmental anomaly; in the others there was probably a conversion of the bone into fibrous tissue owing to inflammatory irritation. It would be difficult in case of operation to distinguish the membrane described from dura mater or the lateral sinus.

Dr. KRETSCHMANN (Magdeburg). *On a Distinct Form of Tympanic Suppuration.*

This is a form of suppuration limited to the lower segment of the tympanic cavity, which the writer called "the recessus hypotympanicus." It is bounded on the outer side by the end of the annulus tympanicus, on the inside by that portion of the labyrinthine wall lying below the promontory, in front and behind by the corresponding lower portions of the tympanic walls, and below by the floor of the tympanum; above,

lies continuous with the middle part of the tympanic cavity. The most notable feature of this space is the sinuous form which it presents, due to the greater or less lateral extension of the recess beneath the wall of the canal: medially, below the labyrinthine structures; anteriorly, below the Eustachian tube; and, posteriorly, towards the facial canal.

Bezold gives the following measurements:—

Sagittal length, 9·5 millimètres; frontal width, 3·0 millimètres; vertical depth, 2·7 millimètres.

The relations to neighbouring parts are of interest—namely, the internal carotid, the bulb of the jugular vein, and the facial nerve, which are only separated from it by thin bony plates.

It is not remarkable that frequently a suppurative process should be set up in these hypotympanic recesses, and its presence can only be ascertained when the membrane is absent in whole or in part—at all events in its lower segment. It can be recognized by the presence of granulations coming from the lower part, and traces of blood upon a bent probe covered with wool when this is introduced into that part of the cavity. The diagnosis is further confirmed if there is a scanty secretion, and it is confined to the corresponding part of the tampon. Patients with this disease often complain of a feeling of tension in the middle part of the sterno-mastoid muscle.

The treatment consists in irrigation with a Hartmann's canula suitably bent, and cauterizations by means of lactic or trichlor-acetic acid on a probe covered with wool. In two cases, after the mastoid operation, the hypotympanic recess was freed by removal of the inferior and postero-inferior parts of the meatus with good result.

Dr. O. WOLF (Frankfort) approved of the use of the term "recessus hypotympanicus." He recommended the use of his small spoon, which could be easily bent in various directions.

Dr. MEYER (Magdeburg), to show the importance of this disease, described a case operated on in which there was thrombosis of the jugular bulb and of the jugular itself.

Drs. PANSE (Dresden) and LENTERT (Halle) mentioned the possibility of reinfection of the operative cavity from the Eustachian tube, and indicated necessity for adopting measures to prevent this.

Dr. HESSLER (Halle) thought that it was not possible to carry out the necessary steps through the meatus without setting up facial paralysis.

Dr. WALB (Bonn) thought that it was easy to operate in the hypotympanic recess under illumination with the intratympanic mirror.

Dr. KRETSCHMANN had tried to use the intratympanic mirror, but was not satisfied with it.

Dr. BARTH (Marbourg). *The So-called "Lateralization" in Bone Conduction.*

This lateralization may be either subjective as heard by the patient, or objective, so that the observer can control it by means of two otoscopes. The latter is exclusively due to changes in conduction and in resonance. In subjective lateralization there is, over and above the two points already mentioned, in the first place unilateral disease of the percipient

apparatus, which rarely gives rise to objective demonstrable changes in the relation of conduction and resonance, but which probably co-operates with them. The circumstances favouring the lateralization in the ear under investigation depend upon reflexion of sound waves and the exclusion of noises from without, and not upon the influence of increased hearing power on one side, namely, increased pressure on the internal ear with so-called hyperæsthesia of the acoustic nerve. Weber's test depends, therefore, upon complicated relations, so that it is not permissible to use it blindly as a means of diagnosis, although when employed with judgment it can give very valuable indications.

Dr. LUCÆ (Berlin) remarked that when the tuning-fork was placed on one side of the head its vibrations were carried diagonally to the opposite ear, the sound waves, therefore, striking the opposite membrane more perpendicularly and setting the conducting apparatus more strongly into vibration. Similar influences could be observed when the tuning-fork was placed on different parts of the mastoid, so that the sound vibrations were conveyed in different directions to the membrana tympani.

Dr. BECKMAN (Berlin) doubted whether sound waves from the mastoid process could fall perpendicularly upon a drum membrane which was directed forwards, inwards, and downwards, but only from a point situated in front of the ear.

Dundas Grant (Trans. and Abs.).

ABSTRACTS.

DIPHTHERIA, &C.

Engelman, Rosa.—*Observations and Statistics upon the Use of Antitoxin in One Hundred Cases of Diphtheria.* "Journ. Amer. Med. Assoc.," Feb. 22, 1896.

THE observations were based upon the use of antitoxin in the Health Department of Chicago. There were one hundred and three cases injected, in all of which a diagnosis was made from a bacteriological examination. Fifty were laryngeal cases. There were only seven deaths; and the good results are attributed to the fact that the antitoxin was used before the third day in ninety-one cases. Two cases of paralysis occurred within twenty-four hours after using the antitoxin. The failures are ascribed largely to too late use of the antitoxin, and to its too sparing use at the beginning.

Oscar Dodd.

Goodall, E.—*Post-Scarlatinal Diphtheria.* "Lancet," Mar. 14, 1896.

THE author acknowledges the frequent association or co-existence of scarlet fever and diphtheria and gives a statistical study of the subject.

StClair Thomson.

Saint-Philippe and Tocheport.—*On Anti-Diphtheritic Serum Treatment.* "Archiv. Clin. de Bordeaux," Nov., 1895.

DURING February and March, 1895, the authors have treated seventy cases of children from six months to ten years, with six deaths, all of which were from

broncho-pneumonia. Sixteen cases underwent tracheotomy. False membranes, laryngitis, and bronchitis yield rapidly to the treatment, only broncho-pneumonia resists; and the authors suggest, when the child has not been operated upon, and has no canula to expectorate with, whether it is wise to continue to soften the exudations which fill the chest when there is no power to expel them. The authors review their experience with considerable detail, and the new method of treatment has given the following results in Bordeaux:—1. A very sensible diminution in the number of tracheotomies (in three months from twenty-seven to thirteen). 2. A lowering of the mortality from twenty per cent. to ten per cent. Locality has something to do with virulence, and the authors state that diphtheria in Bordeaux is less virulent, and less septic, than that of other localities—as, for example, Paris.

R. Norris Wolfenden.

White, A. C.—*Antitoxin: Indications for its Use and Mode of Administration.* "Brooklyn Med. Journ.," Feb., 1896.

THE author considers that the most favourable results are obtained in the most severe cases. He has observed no marked change in the disappearance of membrane produced by antitoxin, but rather a great improvement in the general condition of the patient, often in spite of persistence of the local condition. Among practical points he draws attention to the fact that, in severe cases, Behring's No. 3 serum, or Aronson's preparation, alone should be used, the weaker serums No. 1 or No. 2 of Behring not acting efficiently although given in large quantities. No 1 is only intended for immunization. Whereas five cubic centimetres of the strong serums should be used in children under five, twenty cubic centimetres are not too much for grown children. A second dose may be given if no improvement is observed after nine or ten hours. He recommends a spot below the nipple for the seat of injection, and the use of Roux's syringe with its india-rubber tube, which saves pain caused by struggling during the injection.

Ernest Waggett.

MOUTH, TONGUE, &C.

Anderson, William.—*Carcinoma Lingue.* "Quarterly Med. Journ.," Jan., 1895.

THE author deals first with what he calls the precancerous stage, warning against too prolonged watching of the lesion, but still more against the use of caustics. The offending part should be cut out. Again, in doubtful cases a piece of the diseased tissue is to be cut out for microscopic examination, and if this still leaves the question unsettled, then the surgeon's duty is to give the patient and not the disease the benefit of the doubt—*i.e.*, excise the peccant tissue. Where the diagnosis is certain, "excise without a day's unnecessary delay." Excision of the growth may best be undertaken in all but exceptional cases after ligature of the lingual artery (on one or both sides) at its origin. All enlarged glands should at the same time be removed for histological examination. If these prove cancerous, or if recurrence become evident in the submaxillary triangle, the whole triangle should be cleared out, after ligature of the external carotid. Enlargement of the deep cervical glands beneath the sterno-mastoid forbids further attempts at extirpation.

A. J. Hutchison.

Ballenger, W. L.—*Angio-Neurotic (Eaema).* "Medicine," Feb., 1896.

A CASE of angio-neurotic oedema, affecting the uvula, pharynx, and nose, with threatened suffocation from involvement of the larynx. It occurred in a young

lady of rather nervous temperament. Its onset was sudden, and it was preceded a few days by an attack of hay fever. The œdema rapidly subsided, and was followed by an attack of urticaria.

Oscar Dodd.

Browne, Lennox.—*Chronic Hypertrophy and Varix of the Lingual Tonsil.* "Liverpool Med. Chirurg. Journ.," Jan., 1896.

IN 1547 patients suffering from diseases of the throat and nose, the author found 438 cases of lingual varix. In 60 per cent. it was associated with elongated uvula, in 11 per cent. with chronic pharyngitis, and in 33 per cent. with hypertrophy of the lingual tonsil. As to sex, 69 per cent. were males, 31 per cent. females, and 22·5 per cent. professional voice-users. The great predisposing cause is debility of the vaso-motor (*sic*); the exciting causes are over-use or wrong use of the voice and nasal obstruction. The symptoms are abnormal sensations in pharynx, pricking pain, cough, faucial tenesmus, and hæmorrhage from the throat, especially on waking in the morning.

Middlemass Hunt.

Browne, Lennox.—*The Lingual Tonsil.* "The Med. Magazine," Jan., 1896.

AFTER summarizing Wingrave's views on the anatomy of the tongue, the author briefly describes the inflammatory affections of the lingual tonsil: (1) simple catarrh, (2) lacunar inflammation, (3) parenchymatous inflammation, sometimes ending in abscess. These conditions are very rarely primary, but generally follow on similar affections of the faucial tonsils. Abscess of lingual tonsil may have serious consequences if not recognized and promptly treated. Cases of death from "quinsy" are mostly to be explained on the supposition that the lingual tonsil was also involved.

Middlemass Hunt.

Downie, Walker.—*Aprosexia, Convulsions, and Adenitis depending on Pathological Changes in the Fauical, Lingual, and Pharyngeal Tonsils.* "Glasgow Med. Journ.," Jan., 1896.

DOWNIE (1) describes the condition of "aprosexia," and discusses its causation. During voluntary attention, which is a momentary condition of mind, respiration is suppressed or inhibited. Where respiratory difficulties exist there is not a sufficient reserve of air in the lungs to permit of this period of inhibition or cessation of the respiratory act. It is thus easy to account for aprosexia in patients with adenoids, and for their rapid improvement after removal of these. (2) In four cases of children with adenoids, and who had recently commenced to suffer from convulsive seizures, Downie removed the adenoids. One case has had no seizure since the operation (an interval of some months); another has had only one seizure within two months, instead of several per week; the third has had less frequent fits; and the fourth has not reported himself since the operation. (3) A condition of hypertrophy of the various tonsils may exist without causing any enlargement of the neighbouring glands. When enlarged cervical glands exist in connection with such hypertrophy, the faucial tonsils, owing to their isolated position, are rarely the sources of the irritation. The lingual tonsil is the most frequent offender, while the pharyngeal occupies an intermediate position. Tubercle bacilli may be introduced into the lymphatics by the lingual or pharyngeal tonsils, but this is a rare event.

A. J. Hutchison.

Dukes, Clement.—*A Record of the Common Sore Throats occurring amongst Four Hundred Adolescents during a Period of Twenty-five Years.* "Lancet," Feb. 15, 1896.

CLASSIFIED into inflammatory, scarlet fever, and diphtheria, of which there were only three of the last and four hundred and fifty of the first; the scarlatina

sore throats numbered seventy-one. Some schoolboys have a sore throat at least once a term. All forms of tonsillitis are infectious in the young and demand isolation.

StClair Thomson.

Fox, R.—*The Abortive Treatment of Quinsy.* "Lancet," Feb. 8, 1896.

RECOMMENDS a free application of a strong solution of hydrochlorate of cocaine in acute parenchymatous tonsillitis, the form which commences on one side of the fauces,—peritonsillar inflammation tending to suppuration. In most cases the attack is cut short and suppuration will not occur.

StClair Thomson.

Givel.—*Congenital Tumour of the Gum.* "Rev. Méd. de la Suisse Romande," Mar., 1896.

THE tumour was a granuloma, or sarcoma, in the first stages of development, situated on and behind the lower gum, like a polypus, and of the size of the end of the little finger. Three days after removal a milk tooth (incisor) made its appearance. The infant has since grown well, without any trace of recurrence, and is now six years of age.

R. Norris Wolfenden.

Laurens, Georges.—*Posterior Hypertrophies of the Turbinates.* "Arch. Inter. Laryng., Otol., Rhinol.," Jan., Feb., 1896.

A CRITICAL review dealing with the pathology and clinical aspects of these conditions, and describing the details of surgical treatment; more particularly of the longitudinal galvano-cautery puncture of Ruault, and of the removal by cold and hot snare.

Ernest Waggett.

Lichtwitz (Bordeaux).—*Angioma of the Pharynx.* "Gazette Hebdom. des Sciences Méd. de Bordeaux," April 7, 1895.

DESCRIPTION of a case. The tumour, about $3\frac{1}{2}$ centimètres in height by $1\frac{1}{2}$ in breadth, was situated between the left tonsil and the posterior pillar, extending upwards beyond the tonsillar fossa. It was sessile, and its limits could not be exactly determined. The surface irregular, covered by fine, smooth, transparent epithelium. Its colour, deep brown, with blue-black spots. Apparently firm, but palpation could not be carried out. An extension ran back from its lower part towards the posterior wall of the pharynx. Another patch was found on the middle of the posterior wall. A few scattered pigmented naevi were found on the face, but nowhere else. Symptoms, absolutely none. Treatment, none.

A. J. Hutchison.

McKenna, H.—*Foreign Body in the Tongue.* "Med. Age," Jan. 25, 1896.

THE history of the case of a boy of fourteen, who received wounds in the mouth and apex of the tongue through the bursting of a gun-barrel. After a few days the tongue wound healed, and no inconvenience was experienced except a sense of weight in the organ, speech being unaffected. On the forty-fourth day after the accident a foreign body was found protruding from the site of the wound, which on extraction proved to be a breech-pin one and a half inches long and weighing three-quarters of an ounce.

Ernest Waggett.

Mixter.—*Tumours of the Parotid appearing in the Buccal Region.* "Boston Med. and Surg. Journ.," Feb. 6, 1896.

IN the first case mentioned the tumour projected into the left upper side of the mouth, being apparently between the layers of the soft palate; it was tense and elastic, not at all painful to touch; was shelled out with remarkable ease, proving about the size of a hen's egg. On examination it was found to be an

adeno-chondroma, probably of the parotid. In the second case the tumour nearly filled the mouth; was hard, nodular, and covered with mucous membrane: it was easily removed, proving to be two and a half inches in diameter, and of the same nature as the former.
StGeorge Reid.

Spire.—*Lupus of the Tongue.* "Archiv. Clin. de Bordeaux," Dec., 1895.

A CAREFUL study of the recorded cases of lupus of the tongue with details of three new cases—fourteen in all. It is never an isolated lesion, being most generally associated with lupus of the face. The lesions generally occupy the posterior portion of the base of the tongue. The condition is always a mammillated plaque, raised and of a greyish red colour, hard and indolent. There are not three different clinical types, there being only the different stages of evolution of one type—the lupoid plaque. Lingual lupus has little tendency to ulcerate, and when this occurs it is only in cases where treatment has been long neglected. Enlarged glands are not constant and not diagnostic. The tubercular nodule is the first stage; conglomeration of these produces the lupoid plaque; left to itself it increases, ulcerates, and cicatrises spontaneously, only rarely invading and destroying the organ. Very simple treatment is usually sufficient to arrest the progress. Carbolyzed glycerine, salicylic paste, are good applications. Curettage with Volkmann's spoon may cause dangerous hæmorrhage. Galvano-cautery is good for large nodules, but seldom necessary. The author prefers ignipuncture as generally very satisfactory. Tuberculine injections have been disastrous.

R. Norris Wolfenden.

Woakes, E.—*A New Tongue Depressor.* "Brit. Med. Journ.," Feb. 29, 1896.

THE instrument, somewhat similar in form to Fraenkel's, terminates in a blade, which is provided with a central obliquely-grooved midrib, bounded by two large fenestræ. The former, when the blade is applied far back on the tongue, sinks into the central râfle, and gives a firm grip on the organ, so that forward traction is possible at the same time as depression, and the sensation of choking is avoided.

Ernest Waggett.

Woodbury.—*A Case of Urticaria Œdematosa, with involvement of the Air Passages.* "The Philadelphia Polyclinic," Feb. 15, 1896.

THE case of a boy who, after being stung by a hornet, had a sharp attack of urticaria, accompanied by great swelling of the face and lips, with cedema of the turbinatæ bone, laryngeal cough, with difficulty of articulation and swelling of the velum and fauces. The breathing was a little distressed for a short time, but the boy made a rapid recovery, convalescence being accompanied by copious nasal discharge.

StGeorge Reid.

NOSE AND NASO-PHARYNX, &c.

Bark, J.—*Rhinoliths.* "Liverpool Med. Chirurg. Journ.," Jan., 1896.

SOME general remarks on rhinoliths, with notes of a case in which nucleus consisted of a small piece of slate-pencil.

Middlemass Hunt.

Boulay.—*Causes of Nasal Obstruction in Children.* "Revue Mens. des Mal. de l'Enfance," Mar., 1896.

ADENOID vegetations are the principal factors of nasal obstruction in children, but they are not the only cause. One finds in early life other causes of blocking, especially

hypertrophy of mucous membrane of the turbinated bodies, foreign bodies, and malformation of the septum. Some cases of these diseases are given.

A. Cartaz.

Brimon.—*Nasal Chancre.* "Thèse de Lyon," 1895.

A GOOD pamphlet on chancre of the nasal fossæ. The author has collected thirty recorded observations. The ulcer, which is generally situated on the floor of the nasal fossa, is frequently unnoticed, and the diagnosis is sometimes difficult from tertiary lesions of that region and gummatous tumours. The course does not differ from the ordinary. Sometimes trivial infections occur through the pathogenic nasal microbes.

A. Cartaz.

Coulter, J. Homer.—*Purulent Rhinitis of Children.* "Chicago Med. Recorder," Mar., 1896.

MANY of the standard authors do not so much as mention the occurrence of purulent rhinitis in children, while others give it only a passing notice. Its recognition and treatment are of importance, as it most frequently ends in ozæna. Its etiology is not well established; it is attributed to uncleanness, syphilitic, tubercular, or scrofulous diathesis, and leucorrhœa in the mother. The voice is frequently affected. Pharyngitis, tonsillitis, and bronchitis are usual concomitants. Swallowing such a large amount of septic material has a serious effect on the digestive apparatus and general health of the patient. For treatment the author favours the thorough use of an alkaline spray, followed by one containing eucalyptol and thymol.

Oscar Dodd.

Du Fougeray, Hamon.—*A Case of Acute Primary Infantile Purulent Staphylococcal Rhinitis cured by the Use of Menthol Oil of Ten per Cent.* "Ann. des Mal. de l'Oreille," Dec., 1895.

CASES of purulent rhinitis fall under two heads: 1, those occurring immediately after birth; 2, those occurring at a later period. The author enquires if the purulent rhinitis of the new-born infant is always blennorrhagic, and if at a later age the child is always the victim of gonococcal contamination. He relates the case of a child, thirteen months old, in which bacteriological examination showed the purulent rhinitis to be due to staphylococcus albus et aureus, and in which the gonococcus was absent.

He insists on vomiting as an important symptom. It occurs at each attempt to swallow liquid. He extols ten per cent. menthol oil for its prompt action and simplicity of application.

R. Norris Wolfenden.

Moure, E. J.—*Du Catarrhe Naso-pharyngien.* "Archiv. Clin. de Bordeaux."

THIS is a careful study of chronic catarrh of the naso-pharynx. Only a few points need be noted. This disease is very common among infants, and at that age deserves more attention than it generally receives. Infection has not been proved, and may be disregarded. Occipital headache is a symptom of importance. There may be granulations, the mucous membrane may be dull red to very pale, and may be slightly eroded in places; but ulceration at once excludes the diagnosis of simple naso-pharyngeal catarrh. Beverley-Robinson's theory, that the alterations of voice that occur are due to chronic inflammatory changes in the pneumo-gastric nerve, is, for various reasons, untenable.

Treatment is best carried out by cleansing with alkaline solutions applied by a post-nasal spray; followed by Dobell's solution, or some astringent powder. This can be done by the patient once or twice daily. Further, the parts should be painted with iodized or slightly caustic solutions, such as nitrate of silver 1·5, or

zinc chloride 1:30 to 1:15. Prominent follicles, or the remains of adenoids, etc., must be scraped out. Lastly, hydropathic treatment (sulphurous waters, the waters of Salies-de-Béarn, arsenical waters, living by the seaside, etc.) may be usefully employed.

Of course any complications must be treated.

A. J. Hutchison.

Myles, Robert C.—*Diagnosis of the Diseases of the Accessory Sinuses and their Treatment.* "New York Polyclinic," Feb. and March, 1895.

AFTER giving a short description of the anatomy and physiology of these parts, the author proceeds to consider diagnosis and treatment of their diseases, and concludes with a report of twenty-four cases treated. In diagnosis much stress is laid on transillumination; in treatment the curette is freely used. A few of his cases were cured by simple irrigation through the natural openings, after removal of polypi, cauterization of hypertrophied tissues, etc. In other cases the cavities had to be opened and curetted. The frontal sinus was opened and curetted in several through the infundibulum and anterior ethmoidal cells, in others from in front. The antrum was opened through the alveolus, or above the alveolus, or per canine fossa, or intranasally after sawing and cutting away the anterior end of the inferior turbinated body. Needles or trocars introduced through the wall of inferior meatus did not prove satisfactory. Ethmoidal and sphenoidal disease were treated, after removing most of the middle turbinated body, by carefully opening the floors of the cells with fine drills or trephines, then using curettes and strong applications on cotton wool—besides, as in all cases, the use of irrigation.

A. J. Hutchison.

Ortega, S.—*Emphyema of Frontal Sinus.* "Thèse de Paris," 1895.

THE author distinguishes two forms of frontal sinusitis: acute, with cephalalgia, fever, distension of orbital wall, fetid and purulent nasal discharge, unilateral abscess of the orbito-nasal angle, fistula, etc.; the other, chronic, latent, characterized only by the unilateral discharge of the nose. Description of the symptoms, complications, diagnosis. He believes that surgical intervention is necessary early by the trepanation of the frontal, curettage, and fronto-nasal drainage.

A. Cartaz.

Permewan, W.—*The Naso-Pharynx in Relation to Voice.* "Liverpool Med. Chirurg. Journ.," Jan., 1896.

AFTER referring to the importance of the naso-pharynx as a resonating cavity, the author points out how hypertrophy of the pharyngeal tonsil in adults may interfere directly with resonance, or may cause a reflex paresis of the larynx. He gives two examples of the latter occurring in young women, and remarks that "the same condition of nervous instability which underlies true hysteria" is probably present in such cases. He believes reflex disturbances from the naso-pharynx to be very rare.

Middlemass Hunt.

Ranglaret.—*Anatomy and Pathology of the Ethmoidal Sinus.* "Thèse de Paris," 1896.

A VERY interesting study of ethmoidal sinusitis. In an elaborate and perfectly clear anatomic demonstration the conformation and disposition of ethmoidal cells are described. They form three groups: two anterior, one dependant from the infundibulum, another from the ethmoidalis bulla; the third, posterior, constituted by larger cells, opening in the superior meatus. The description is similar, with exception of some details, to that of Zuckerkandl. Clinically, the ethmoidal sinusitis is acute or chronic, and in the latter form purulent or latent. The

diagnosis is sometimes difficult from the other sinusitis, the more so as they are frequently connected—anterior ethmoiditis with frontal, posterior with sphenoidal. The author believes that lavage and medical treatment are insufficient; he advises surgical intervention and curettage, *viâ* the nares, or preferably through the orbit.

A. Cartaz.

Ripault.—*A Case of Rhinolith.* "Annales des Mal. de l'Oreille," Dec., 1895.

THE rhinolith contained as a nucleus a cherry stone, which had been introduced into the right nostril several years before. The patient was a girl, aged eight.

R. Norris Wolfenden.

Ripault.—*A Case of Confluent Papillomata of the Nasal Fosse.* "Annales des Mal. de l'Oreille," etc., Nov., 1895.

IN a man of thirty-six the right nostril was obstructed by a solid, grey-red tumour, bleeding easily, and composed of a number of isolated lobes, of which the greatest number were situated on the septum, some on the floor, and others on the internal skin of the nasal ala. It was removed with the cutting curette. Histologically it proved to be a papilloma.

R. Norris Wolfenden.

Ripault.—*Three Cases of Empyema of the Frontal Sinus.* "Annales des Mal. de l'Oreille," etc., Nov., 1895.

THREE cases are recorded in detail. In each the sinusitis was on the right side, which accords with the experience of others. Whenever there is purulent discharge of the right nostril, migraine, right-sided facial neuralgia, without apparent cause, frontal sinusitis should be thought of.

Vertigos and epileptiform crises accompany certain sinusites, and disappear after treatment. Energetic pressure over the sinus, especially its lower part, evokes pain, or marked sensitiveness in all cases. Transillumination has not been of any service to the author. Pus may be found in the middle meatus anteriorly, though the author has not seen it on posterior rhinoscopy.

As the sinus extends frequently to the external angle of the orbit, fistulae may open at any part of it, and there may be slight and painless oedema of the upper eyelid, which, coinciding with neuralgia, indicates sinusitis. These signs are of more importance when they affect the right side than when they are on the left. When a suspicious orbital phlegmon has been opened, and the bone is found to be denuded, but without fistula, exploratory trephining of the sinus ought to be performed.

Wherever there is an orbital collection it ought to be largely opened and drained, but we ought to beware of injections, which easily diffuse the infectious elements into the loose tissue of the back of the orbit.

Incision ought to be made by preference over the anterior wall, immediately over the frontal prominence, and the opening ought to be large, so as to expose the whole sinus. Curettage ought to be thorough, and destroy the fibro-mucosa, as well as the vegetations, and the orifice of the naso-frontal canal and its course should not be overlooked. Chloride of zinc is preferred for swabbings. A long drain should be introduced through the naso-frontal canal into the nasal fosse, as large as possible. Drainage of the sinus is indispensable for cure. A stylet should traverse the drain. Irrigations should be made with boiled water or dilute sublimate, and salol gauze is preferred. The first dressing should not be removed for several days, when irrigation with boiled water or boracic acid should be performed. This should be repeated two or three days after, and at the end of fifteen days, if there is no further suppuration, the drainage tube may be removed. If suppuration persists, irrigations should be made daily. At the end

of a few weeks, if suppuration is not arrested or notably diminished, it is preferable to advise the patient to undergo a second operation, rather than submit him to irrigations for several months with uncertain results. *R. Norris Wolfenden.*

Vansant.—*Operation for Synechia of the Nasal Fossæ.* "The Philadelphia Polyclinic," Jan. 25, 1896.

RECOMMENDS the excision of the whole of the cicatrix. The cicatricial band is seized with a pair of strong clamp forceps, and crushed, the attachments being then severed with the knife or scissors; the raw surface is then touched with trichlor-acetic acid, and a solution of cocaine prescribed. In some cases a diaphragm of ivory or celluloid is inserted. *StGeorge Reid.*

LARYNX. TRACHEA. &C.

Angelesco.—*Epithelioma of the Epiglottis.* Soc. Anat., Paris, Dec. 20, 1895.

A WOMAN, aged sixty-three years, was admitted into hospital for some difficulty of respiration and deglutition, and with bronchitis. There was a tumour of the epiglottis the size of a nut, irregular, dense, and without glandular infection. Extirpation by subhyoidan laryngotomy, after preliminary tracheotomy. Death on the twelfth day from broncho-pneumonia and pulmonary gangrene. The tumour was an epithelioma. A small cretaceous mass in the trachea, at the bronchial division, was also seen. *A. Cartaz.*

Bunch, J. L.—*A Case of Bilateral Paralysis of the Abductors of the Vocal Cords, due to Syphilis.* "Lancet," Feb. 29, 1896.

SHORT review of the subject, with some bibliography, and account of a case where a final acute attack necessitating tracheotomy had been preceded by three others during the previous eight months, from all of which the patient recovered without surgical interference. He had no symptoms during the intervals. The signs of secondary syphilis were obvious on admission to hospital. It is probable that some cases recorded as spasm of the glottis were really cases of abductor paralysis.

StClair Thomson.

Cheyne, W. Watson.—*The Objects and Limits of Operation for Cancer.* "The Medical Society's Transactions," Vol. XIX., 1896. "Lancet," Feb. 22, and Mar. 14, 1896. And the Lettsomian Lectures.

As compared with the breast, cancer in the mouth and throat is more favourable as regards the glandular deposits, for the glandular area is more exposed to view and metastatic deposits are quite infrequent. With regard to cancer in the tongue, if the disease is superficially and laterally placed, it is sufficient to remove half the organ. When the tongue is deeply infiltrated it should be removed in its entirety, together with the large lymphatic plexus, which is not unilateral, so that enlarged glands are frequently found on both sides. In all cases it is well to take away the sublingual and submaxillary glands on the affected side, along with the lymphatic glands so closely connected with them. Hence in the cases of superficial cancer he ties the lingual artery in the neck and clears out these glands and the fat, even although no glands can be felt, and then clips out the tongue from the mouth. In these cases the wound in the neck does not communicate with the mouth and remains aseptic. In the deeper form of tongue cancer Kocher's operation is advised. The limits of the operation for cure are: very extensive infiltration of the tongue muscles, especially downwards towards the hyoid bone.

extensive affection of the jaw in addition to the tongue; extension to the upper part of the larynx; and involvement of the carotid artery and vagus nerve in the large glandular mass.

Cancer of the pharynx commences in sixty per cent. of the cases on the surface of the tonsils. Causes little trouble in its early stages, and hence is apt to be extensive before advice is sought. Full records given of cases, and a study of various points connected with the operation. With regard to the methods of gaining access to the parts, no definite rules can be laid down. With regard to preliminary tracheotomy, it is an advantage to manage without it if possible. When it is required there is nothing gained by performing it three or four days before the major operation. As to the control of hæmorrhage, the external carotid might be tied in a preliminary operation, or its branches tied, or the bleeding controlled by temporary compression of the artery during the removal of the tumour. Whether glands are met with or not the lymphatic area ought to be cleared out. With this purpose in view the skin incision should be very free, running from the mastoid process above down to the middle of the thyroid cartilage along the anterior border of the sterno-mastoid muscle. This gives free access to the tissues under the sterno-mastoid, where recurrence is so apt to take place, and also to the internal jugular, which should without hesitation be ligatured and resected if any glands are adherent to its sheath. The indications for division of the jaw are considered, and it is pointed out that marked increase in the space is secured by simply dividing the posterior belly of the digastric and stylo-hyoid muscles. As regards subhyoid pharyngotomy—*i.e.*, division of the thyro-hyoid membrane close to the hyoid bone—it secures no particular advantage in most cases. As to the treatment of the wounds, it is important to carry out antiseptic methods carefully, although of course these cases are not amenable to aseptic treatment. Free drainage, cleanliness and care of the teeth, and packing with cyanide gauze sprinkled with iodoform are the principles of after-treatment.

In severe cases the stomach tube is generally introduced at the time of the operation and left in for three or four days, and then passed whenever necessary.

Lastly, with regard to results: these are tabulated very fully in various tables. The three principal divisions give the following statistics. Group I. consists of cases where the disease was removed from the mouth with or without splitting the cheek, and with or without tracheotomy—where, in fact, there was no wound in the neck communicating with the mouth. Group II. is formed of cases of disease of the pharynx where the internal wound communicated with a wound in the neck. Group III. includes cases where the disease involved both pharynx and larynx.

	No. of Cases.	Mortality per cent.	No Benefit per cent.	Benefit per cent.
Group I.	23	8.0	30	52
Group II.	91	29	54	17
Group III.	58	55	81	12

As regards Group I., the author thinks there can be no question as to the advantage of the operation; and several cases in it would have had a much better chance had the operation been more extensive, and had they thus come into Group II. As regards Group II., the results are encouraging—for the mortality of twenty-nine per cent. is evidently reducible. The results in Group III. show that, although all such cases need not be excluded from operation, most of the patients will be better if left alone.

StClair Thomson.

Chapuis.—*Metastatic Epithelioma of the Larynx.* "Lyon Méd.," Mar. 31, 1896.

DESCRIPTION of a rare case of metastatic epithelioma of the larynx. The patient, sixty-one years old, had an epithelioma on his leg, necessitating amputation.

Three weeks later laryngeal troubles, with cedema, supervened. Intubation, and secondarily, tracheotomy, were not sufficient to relieve the respiratory difficulty. At the necropsy: Epithelioma of the epiglottis and vocal band. From the absence of laryngeal troubles before the amputation the author concludes it to be a metastatic cancer.

A. Cartaz.

Knight, C. H.—*Tubercular Laryngitis*. "Internat. Clinics," Vol. IV., Fourth Series.

A CLINICAL lecture. The patient should inhale every hour during the day vapour of menthol (twenty grains to the ounce of fluid albolene). Solution of iodoform in ether should be applied to ulcers. Krause's treatment by curetting and lactic acid is applicable "only to a certain small proportion of cases in which the pulmonary disease is still very limited and not in active progress." Extirpation of the epiglottis when ulcerated, and when the ulcer is certainly limited to the epiglottis, is justifiable; but extirpation of the whole larynx "probably will not be attempted—at least, not in this country."

A. J. Hutchison.

McBride.—*Clinical Fragments of Laryngology*. "The Med. Chron.," Feb., 1896.

I. *Three Cases of Lupus of the Throat.*

1. A boy, aged fourteen. The treatment consisted in scraping and painting with lactic acid solutions (up to sixty per cent.). Result, very good.

2. A patient, aged thirty. The uvula was removed and stated to be "undoubtedly tuberculous." Other parts were scraped, and treated with lactic acid and the electric cautery. Creosote internally was given. The results in the throat were better than in the nose.

3. A girl, aged fifteen. Here scraping with Heryng's curette and sharp spoon, and applications of lactic acid, also removal of a tubercular mass with Krause's forceps, was the treatment.

II. *Malignant Disease of the Larynx at an Early Age.*

This was the case of a girl, twenty-four years old, who died of epithelioma.

III. *Fibro-mucous Polyp of the Naso-Pharynx.*

The snare used through the nose is considered by this operator as the least satisfactory way of removal. A palate hook and a bent snare passed up behind the palate, with or without the guidance of the mirror, is often successful.

Kuhn's forceps, however, are especially serviceable.

IV. *Removal of Foreign Body from the Tympanum.*

This consisted of a locust bean in a child five years old, which was immovably wedged in the tympanum; and after the usual methods of removal had failed Zaufal's operation was practised, the cartilaginous meatus was partially cut through, and some chiselling of the posterior and upper wall of the meatus also had to be performed in order to get room. The case did very well. Barclay J. Baron.

Tilley, Herbert.—*Case of Functional Aphonia: Treatment, etc., with special reference to so-called Varicose Veins at the Base of the Tongue*. "Lancet," Feb. 15, 1896.

CASE of functional paresis of the abductors, in which patient had been treated for the veins referred to without relief, recovering under electricity and tonic treatment. Doubts the existence of varicose veins at the base of the tongue or their connection with throat symptoms.

StClair Thomson.

Wagner, Clinton.—*Thyrotomy, with Report of a Series of Cases operated on during the past Twenty Years.* "Med. Record," Jan. 4, 1896.

THYROTOMY is always justifiable in cases of malignant growths (in these thyrotomy or exsection of the half or whole larynx is required) and in occlusion of the larynx in very young children.

The difficulty of cutting through a thyroid in which ossification has taken place is overcome by the use of a small file-cut wheel saw, made to revolve by the electro-motor. A sharp-pointed knife or scissors should never be used, because of the danger of perforating the posterior wall of the larynx, and so causing a laryngo-oesophageal fistula.

To maintain the cut edges of the thyroid in close apposition no deep sutures are required, but only a few skin sutures, aided by plaster.

The author reports ten cases—five adults, five children. The adult cases were as follows :—

1. Epithelioma—Tracheotomy and thyrotomy. Removal of growth, October, 1875; recurrence, November, 1876; operation repeated, June, 1877, and at three subsequent dates (at patient's request); death, June, 1879.

2. Epithelioma—Tracheotomy and thyrotomy. Recurrence within four weeks; death in three months.

3. Papilloma—Intralaryngeal operation, soon followed by tracheotomy and thyrotomy (the growth reported to be papilloma on inflamed base). A few months later, recurrence, necessitating use of tracheal canula; later, thyrotomy (growth reported to be epithelioma); recurrence within four months; exsection of right half of larynx; death, fifteen days later.

4. Epithelioma or Papilloma (?)—Tracheotomy (piece of growth removed by endolaryngeal method, reported to be epithelioma). Fifteen months later, thyrotomy and removal of growth (reported to be papilloma); death, about ten weeks later, of some acute pulmonary trouble.

5. Echondrosis—Tracheotomy had been performed elsewhere, and canula worn for a year. Thyrotomy performed, but growth too hard to be removed; no change fourteen months later.

Of the cases in children, three were cases of papilloma; result good. Two were the results of diphtheria: one reported well twelve and a half years later; the other, a very complicated case, was operated on last October, and is still wearing the tube; voice is returning, and probably the canula will soon be dispensed with.

A. J. Hutchison.

THYROID, NECK, &c.

Barclay-Ness, Middleton, and Finlayson.—*Three Cases of Sporadic Cretinism, with (in two) Gratifying Results from Thyroid Treatment.* "Glasgow Med. Journ.," Feb., 1896.

A. J. Hutchison.

Hawthorne. *Malignant Mediastinal Tumour with Secondary Growth in the Liver, having Unusual Features.* "Glasgow Med. Journ.," Feb., 1896.

THE chief interest in this case lay in the abdominal symptoms, but it is interesting to note that a temporary improvement in the voice took place, although the hoarseness was due to paralysis of the left vocal cord, due to pressure of the tumour on the left recurrent nerve.

A. J. Hutchison.

Lichtwitz (Bordeaux).—*Branchial Fistula of the Neck*. "Archiv. d'Electricité Méd.," April 15, 1895.

THIS fistula extended from the left side of the neck, about 2 centimètres from the middle line, between the hyoid and thyroid, upwards $6\frac{1}{2}$ centimètres to within and behind the great cornu of the hyoid on the right side. Fluids injected were tasted by the patient in the pharynx, though never seen by Dr. Lichtwitz. Various forms of treatment had proved unsuccessful. Electrolysis was completely successful.

A. J. Hutchison.

Lindsay, Steven.—*A Case of Mediastinal Tumour, involving Root of Left Lung*. "Glasgow Med. Journ.," Feb., 1896.

THE most prominent symptoms were paroxysmal cough and dyspnoea. Certain diagnosis was impossible till the *post-mortem* examination.

A. J. Hutchison.

Nicoll, Jas. H.—*Etiology and Treatment of Chronic Enlargements of Lymphatic Glands, with special reference to those of the Neck*. "Glasgow Med. Journ.," Jan., 1896.

THIS paper deals with chronic enlargements of the glands of the neck, more particularly with bilateral affections of the glands about the carotid sheath and the prevertebral glands—that is, those to which the lymphatic vessels of the pharynx run. The object of the paper is to emphasize the necessity for a more careful study of the pathology of these so-called strumous glands. In the writer's opinion a very large percentage of these cases are tubercular from the first, the tubercle bacilli gaining entrance through the tonsillar structures of the nose and pharynx. In all cases, therefore, of enlargement of these deep cervical glands, not only should the glands be excised, but also the whole of the tonsillar tissue of the nose and pharynx (so far as possible) should be removed, whether it be apparently diseased or not. Further, in all cases in which there is sensible hypertrophy of the tonsils, or in which there is recurrent naso-pharyngeal catarrh, ablation of the hypertrophied tissues is the only method of preventing the occurrence or recurrence of tubercular disease of the cervical glands.

A. J. Hutchison.

EARS.

Arslan.—*Acute Hematoma of the Left External Auditory Canal*. "Arch. Ital. di Otol., Rin., e Lar.," Jan. 1, 1896.

THE author describes a case of hæmatoma of the external auditory canal of sudden onset, and without apparent cause, in a singing master, aged sixty, who had always enjoyed good health, and who was the subject of no pathological condition either personally or by heredity. Sudden onset with severe pain in the ear and considerable loss of hearing power. The patient had no history of the slightest traumatism, the only fact of note being, perhaps, that at the time he had over-exerted his voice. On examination, two days after the commencement of the pain, the canal was found completely obstructed by a tumour of bluish colour, fluctuating and painful on pressure, growing by a broad base from the floor of the canal. Incision gave exit to blackish blood. Microscopic examination of the fluid revealed nothing beyond the normal elements of the blood. The case differs from similar ones published up to date in the rapid development of the tumour,

accompanied by pain, deafness, malaise, and some febrile movement. As to etiology, the author believes it is to be explained by an anomalous vascular condition of the region, which, in consequence of a prolonged effort in singing, had induced hæmorrhage giving rise to hæmatoma. However, the author remarks that this is but an hypothesis, and that the true cause remains obscure.

"Arch. Inter. d'Otol., Rhin." *M.M. (Waggett).*

Bishop, S. S.—*Gangrene of the Ear.* "Journ. Am. Med. Assoc.," Mar. 28, 1896.

THIS is a rare disease, and many of the text-books on the ear do not mention it. The patient, aged two years, came under the author's care at the Illinois Eye and Ear Infirmary on January 8th, 1896. It had been placed in an orphan asylum five months before. Two months before it had developed a right-sided suppurative otitis media, and five days later the concha had turned black and emitted a foul stench—the characteristics of the pulpy form of hospital gangrene. The necrotic process involved both anterior and posterior surfaces of the concha to a large extent, and had begun to invade the integument covering the mastoid process. The child being much emaciated, it was put on a nourishing diet and warm applications applied locally. The necrotic affection invading the osseous structure of the mastoid, this was removed by an operation. The child progressed favourably until measles developed, and the child succumbed to accompanying lung trouble about one month after admission. An autopsy showed miliary tuberculosis of the lungs. Among the twenty thousand ear cases treated at the infirmary no previous case has been recorded.

Oscar Dodd.

Bonnier.—*The Mutual Relations of the Ampullary Apparatus of the Internal Ear and the Oculo-Motor Centres.* "Bull. Méd.," May 15, 1895.

THESE relations are made manifest by disorders such as nystagmus, ataxic movements, retarded accommodation, and sometimes retinal compression.

Lacourret (Waggett).

Chiucini (Rome).—*Four Cases of Accidental Opening of the Lateral Sinus in Mastoid Operations.* "Ibid. Otol.," 1895, p. 55.

AN interesting peculiarity common to the four cases reported by the author is the fact that the opening of the sinus did not occur until after the antrum was entered and during curettement of that cavity. In all four instances hæmorrhage was controlled by packing with iodoform gauze, and all the patients recovered.

"Arch. de Laryn., d'Otol., et Rhin." *Luc (Waggett).*

Courtade.—*Prophylaxis of Diseases of the Ear.* "Bull. Méd.," April 21, 1895.

IF the diminution of auditory power is frequent the causes must be sought, apart from eruptive fevers, in the inflammatory affections of the mucous membrane of the naso-pharynx, and adenoid vegetations. Treatment should then be directed at once to the affections of the ears, and the original lesions which produced them. Consequently attention should be directed to a healthy condition of the nose and naso-pharynx. A rigorous antisepsis prevents complications.

Lacourret (Waggett).

Dasgue.—*Two Cases of Deafness following Mumps.* "Gaz. Hebdom. du Sc. Méd. de Bordeaux," Feb. 3, 1895.

THE author relates the cases of two patients suffering with deafness after mumps. The increasing intensity of the trouble was notable. In one case the symptoms

proved to be those of Ménière's disease. The author localizes the lesions in the internal ear.
Lacoarret (Waggett).

Downie.—*Case of Total Deafness of Sudden Onset.* "Glasgow Med. Journ.," Jan., 1896.

PATIENT had inherited syphilis. There was a gumma in the scalp, which broke down; continuous suppuration caused excavation of a large portion of left temporal bone. *Post mortem*: the external meatus and tympanum were found healthy. Close to outer end of internal meatus the roof suddenly sloped down to meet the floor, and the pressure of this new bony growth appeared to have destroyed the vitality of the auditory nerve; the facial seemed intact. Of the semicircular canals only a small portion of the horizontal, embedded in dense bone, remained. The cochlea seemed of normal size, but the bony spiral and laminae were so thickened as to encroach on the cavity.
A. J. Hutchison.

Garnault.—*Is it Possible to Draw any Conclusions from the Form of the Cranium with regard to Anatomical Dispositions which render Operations on the Temporal More or Less Dangerous?* "Gaz. des Hôp.," Mar. 28, 1895.

THE author does not believe that the anatomical formation can give any clue to the relations of the petrous bone. According to him, there are individual variations which render operation dangerous.
Lacoarret (Waggett).

Geronzi (Rome).—*Facial Hemiplegia of Otitic Origin.* "Arch. Ital. di Otol.," 1895, p. 328.

THE case which forms the subject of this work supports the opinion which is becoming increasingly predominant to-day, according to which the majority of supposed instances of facial paralysis *à frigore* are in reality dependent on inflammatory lesions more or less pronounced, sometimes latent, of the middle ear. Geronzi's patient, a man of sixty-one, presented the signs of a right facial hemiplegia the day following a chill. He complained of no interference with hearing or any pain in the ear. However, a systematic examination made by the author revealed the presence of tympanic congestion, and considerable impairment of hearing. These symptoms ceased spontaneously after a few days, at the same time as the paralysis disappeared without recourse to electrical treatment. The very legitimate conclusion of the author is that in all cases of facial hemiplegia examination of the ear is essential.

"Arch. Inter. Otol., Rhin." *Luc (Waggett).*

Gradenigo (Turin)—*Cerebral Abscess of Otitic Origin; Trepanation of the Cranium and Evacuation of the Abscess; Cure.* "Arch. Ital. di Otol.," 1895, p. 354.

A MAN of thirty-nine, subject to otorrhœa on the left side from childhood, was attacked suddenly with somnolence and aphasia, without paralysis of the face or limbs. These symptoms, taken together, enabled the author to diagnose an abscess of otitic origin in the temporo-sphenoidal lobe, and to decide on operation. The skull was trephined immediately above the auditory canal. The dura mater, after exposure, was punctured a centimètre above the roof of the canal with an aspirator needle measuring three millimètres in diameter, which was driven in to the depth of three centimètres in the direction of the tegmen. In this manner a small quantity of clear fetid fluid was drawn off, but no pus. The fetid character encouraged the author to carry his operation deeper. The dura was then incised crucially, and, the cerebral material being opened with a bistoury to a depth of three centimètres, and the edges of the incision well retracted, issue was given to

the fœtid contents of an abscess about the size of a pigeon's egg. Subsequently drainage was provided by a rubber tube surrounded with iodoform gauze. Fifteen days later the cavities of the diseased bone were opened and curetted by the Schwartze-Zaufal method. Two weeks later the patient was on the road to recovery, and the aphasia had almost completely disappeared.

"Arch. Inter. Laryng., Otol., Rhin." *Luc (Waggett).*

Guément.—*Intractable Otorrhœa, dating from 1888; operated on in January, 1894; Cure.* "Ann. de la Policlinique de Bordeaux," July, 1895, No. 27.

STACKE's operation is indicated, according to this author, in all old cases of otorrhœa which resist ordinary treatment. He relates the history of a girl who, during four years, had three attacks of mastoiditis, with spontaneous opening of the epiphysis. Free opening of the mastoid cells, with removal of the postero-superior wall of the meatus, brought about final cure. The operation accentuated a facial paralysis, which diminished under the influence of electricity.

Lacourret (Waggett).

Heath. F. C.—*Some Sequels of La Griffe.* "The Medical Age," Jan. 10, 1896.

THE most frequent of these is suppurative inflammation of the middle ear, characterized by great severity and persistency, the suppuration being prolonged, the hearing much impaired, and with strong tendency to formation of mastoid abscess. From his experience the author emphasizes three things: that operation upon the mastoid is not so generally necessary as one is led to suppose; the great relief from local blood-letting with Bacon's artificial leech, even in mastoid cases; the great advantage of pushing potassium iodide.

Middlemass Hunt.

Lake, R.—*Excision of the Ossicles and Membrane in Chronic Suppuration of the Middle Ear.* "Med. Press and Circ.," Feb. 26, 1896.

THIS procedure may be undertaken, after failure with local antiseptic treatment, in cases where mastoid operation may be safely avoided, and also in those in which success with antiseptics has resulted in great loss of hearing. In the one class the operation very often succeeds in affording efficient drainage and access for purposes of cleansing; and, in the second, the hearing power is greatly improved by exposing a stapes, unhampered by cicatrices, directly to sound vibrations. In comparison with cure by antiseptics this method yields remarkably good results with regard to hearing power. The author recommends, among other practical details of the operation, the use of cocaine, whether general anaesthesia is employed or not, and previous cleansing with solutions not more than lukewarm. The chorda lies 1/32nd of an inch behind the membrane at its posterior attachment, and may be avoided by use of the point of the knife only. If the anterior ligament and the tensor tympani are carefully divided, traction on the malleus will often bring away the incus also.

The author also enumerates the conditions in which the procedure is advisable.

Ernest Waggett.

Langenbuch.—*Ligature of the Jugular Vein for Otitic Pyæmia.* "Bull. Méd.," Jan. 6, 1895.

THE author recommends that in cases where there exists with otorrhœa an obvious source of pyæmic infection, the jugular should be tied without hesitation, in order to prevent dissemination of infectious products. This proceeding has yielded him good results in the cases which he reports, and Sonnenbürg has obtained a complete cure in a case of this nature.

Lacourret (Waggett).

Lemairey.—*Ménière's Syndrome cured by Pilocarpin.* "Annales des Mal. de l'Oreille," etc., Nov., 1895.

THE patient, a man, aged twenty-nine, was cured of the first attack of vertigo by injections of pilocarpin, and the general symptoms greatly improved under a course of this treatment, the more so as the dosage was increased. Finally all symptoms disappeared, and for a month the patient was cured. Two attacks followed, and were cured by quinine. The solution of pilocarpin was 10 centigrammes in 10 grammes of distilled water, and .004 milligrammes were commenced with, increasing by .001 milligrammes every second day. The patient also took 75 centigrammes—1 gramme of quinine daily; but the author does not think that this affects the validity of pilocarpin.

R. Norris Wolfenden.

Lubet-Barbon.—*The Localization of Inflammation of the Temporal in Relation to the Anatomical Development of the Bone.* "Arch. Inter. Laryng., Otol., Rhin.," Jan., Feb., 1896.

THE author describes the process of development at the various stages of intra and extrauterine life, and maintains that inflammation may be limited to any one of the elements of which the complete temporal bone is composed. Not only in the infant does one observe necrosis limited to the squamous, mastoid, or tympanic portions respectively, but even in the adult it is possible to detect a primitive osteitis, which, in order of frequency, attacks the mastoid, the squamous, and the tympanic portion respectively. Osteitis of the mastoid is the most grave and the most painful; that of the horizontal plate of the squamous is less painful, but more rapid in its extension, and is dangerous by reason of its proximity to the brain. Osteitis also occurs of the squamous above the linea temporalis, and the author believes that most cases of exostosis of the meatus are due to osteitis limited to the tympanic bone, the postero-inferior and the anterior walls of the canal being the parts affected. There is then a certain relation between the pathology and the anatomy of the temporal, but it is only in exceptional cases that such a relationship is to be noted, in the majority of chronic cases the inflammation being situated at the points of coalescence of the elements which come in contact at the petro-squamous suture.

Ernest Waggett.

Lucas.—*Case of Thrombosis of Lateral Sinus.* "Birmingham Med. Review." Jan., 1896.

THIS patient was a woman, aged twenty-five, who had suffered from her ears ever since she was two years old. There was a great deal of pain on the right side of the head behind the ear, and an extremely tender spot at the lower and posterior border of the mastoid process. She was drowsy; temp., 102; pulse, 65 per minute and full; right optic disc "choked." The antrum and mastoid were opened and pus and granulation tissue scraped out. She had daily rigors for some days after the operation, and the lateral sinus was opened, and it and the jugular vein contained clot. This was removed and the wound plugged, but no improvement took place, and she died.

The operator considers that a diagnosis of thrombosis of the lateral sinus can be made when there is pain over the emissary mastoid vein, slight fulness of the neck about the course of the upper third of the internal jugular, frequent rigors, and high temperature. The operation ought then quickly to follow the diagnosis, or one is apt to get, as in this case, extension of the infective process by the petrosal sinuses to the cavernous and along the ophthalmic vein, giving rise to suppuration in the left orbit. Pyæmic infection of the lungs was the cause of death.

Barclay J. Barron.

Marchant, G.—*Treatment of Intracranial Abscess of Otitic Origin.* "Sem. Méd.," Jan. 3, 1895.

INTRACRANIAL abscesses are, according to the author, rarely of otitic origin. He meets with one instance in thirty operations, and, according to Broca, in eighty-seven. He also considers that intervention should be practised only—if symptoms persist—after trephining the mastoid. This practice has always been successful in his hands.

Lacourret (Waggett).

Marchant, G.—*Mastoiditis complicating Otitis.* "Bull. Méd.," Jan. 3, 1895.

AFTER discussing those inflammations of the mastoid which complicate otitis, and the troubles which they entail, the author comes to the following conclusions:—

1. Rarity of the cranial complications, particularly with modern treatment. 2. Early trephining is the best means of prevention. 3. The cranial cavity should not be opened unless symptoms of positive character are present.

Lacourret (Waggett).

Milligan.—*Foreign Bodies in the External Auditory Meatus.* "The Med. Chron.," March, 1896.

A CASE is alluded to in which much injury was done by injudicious attempts to remove a foreign body from the ear that was not present.

The usual rules as to syringing, etc., are repeated and rightly insisted upon.

The "glue method" of Lowenberg is also described. This consists in dipping a small camel-hair brush in a strong solution of glue, and applying this to the presenting part of the foreign body. When set, traction must be made.

In the case of insects in the ear, syringing with warm water is often sufficient; not, the vapour of chloroform or smoke from a tobacco-pipe may be used.

Barclay J. Baron.

Moure, E. J.—*Removal of the Drumhead in a Case of Intractable Otorrhœa.* "Gaz. Hebdom. du Sc. Méd.," April 7, 1895.

ABLATION of the drumhead should be practised when an intractable otorrhœa is met with. Cocaine recommends itself to the author as the best anæsthetic, allowing the patient to follow the stages of the operation, which is completed by curettage of the tympanum. The operation presents certain dangers; antiseptics is *de rigueur*. As far as possible, section of the chorda tympani is to be avoided. Auditory acuity is by no means abolished.

Lacourret (Waggett).

Randall.—*The Importance of recording Labyrinthine Deafness.* "The Philadelphia Polyclinic," Feb. 8, 1896.

THE author draws attention to the fact that in many cases of deafness where Politzerization appears to have done harm, it has been due to the existence of unrecognized labyrinthine changes. He insists on the necessity of a careful examination of the hearing by bone conduction, and is in favour, in those cases which show any diminution, of the use of the catheter rather than Politzer's bag, as being more perfectly under control. He mentions two cases, one of deafness following head injury, and the other hereditary syphilis, supporting his views.

St George Reid.

Shield, M.—*The Treatment of Severe Mastoid Disease by Implantation of Skin Flaps.* "Lancet," Feb. 8, 1896.

ONE or two skin flaps are raised from behind the auricle, the diseased tissues are cleared out so as to convert the tympanum and mastoid cavity into a common

chiasm, and the skin flaps are then replaced so as to "paper" the cavity left. Three cases are recorded in which there was great improvement, though not entire cessation of the discharge.

StClair Thomson.

Willetts, Joseph E.—*Is there Disorganization of the Stapedius Muscle? Implicability of Politzerization as a Routine Treatment.* "Pittsburg Med. Rev.," July, 1895.

THE author maintains that in otitis media catarrhalis chronica undue importance is given to atmospheric pressure as the agent causing depression and retraction of the drumhead. It does not exist long enough (except in cases of complete stenosis of the Eustachian tube) to produce the result. Every time the tube is opened the membrane, ossicles, etc., should at once resume their normal position, *i.e.*, before adhesions, etc., have formed; but this does not take place. The true explanation is to be sought in the anatomical and physiological relations of the tensor tympani and the stapedius muscle. These are mutually antagonistic. Now, the stapedius is a delicate muscle lying in a bony canal, in direct contact with the periosteum, and not protected by any connective tissue sheath. Hence any inflammation affecting the canal will rapidly injure the muscle, leaving the tensor tympani (which is better protected and less easily hurt) without any opponent. Politzerization, which may be regarded as a massage of the tensor tympani, is therefore contra-indicated, as are also all other forms of massage. Treatment should be, in the early stages, intratympanic injections, and in the stage of sclerosis, ankylosis, etc., ossicectomy.

A. J. Hutchison.

REVIEWS.

Garnault.—*Cours Théorique et Pratique de Physiologie d'Hygiène et de Thérapeutique de la Voix Parlée et Chantée; Hygiène et Maladies du Chanteur et de l'Orateur. Avec 82 figures dans le texte.* By Dr. GARNAUT. Paris: A. Maloine and E. Flammarion. 1896.

THIS book is a very ingenious arrangement in a number of lessons of material much of which is tolerably familiar to our readers as presented in the well-known work on voice, song, and speech of Browne and Behnke, which Dr. Garnault has already translated into French, and his indebtedness to which is freely acknowledged in the numerous references made to it. Dr. Garnault has, however, methodized and elaborated the matter in his own somewhat picturesque fashion. He commences with the study of acoustics, and proceeds then to the description of the anatomical arrangements employed in the production of voice—in particular the mechanism of respiration, the mode of production of vowels and consonants, the registers, the transformations of the larynx, the respiratory types, etc.—and concludes with chapters on the hygiene and diseases of singers and speakers. Many questions of general and special interest arise, and of these a large number have already been thoroughly worked out; but they are set forth in a very intelligible form, and the work, although open to the unavoidable objections to a mixture of the popular and the scientific, will be found of interest and value to

both popular and scientific students—that is to say that there is much medical information of value to artists, and many traditions of the artistic world with which the physician or laryngologist may become acquainted for the first time in such a book as this.

Looking at one or two of the more “vexed questions,” and the treatment of them by the author, we find him a staunch advocate for the inferior costal and diaphragmatic method of respiration, the mechanism of which he describes very clearly. His absolute condemnation of the “lateral” type, if by this he means the inferior costal, so ably advocated by our *confrère* Joal, of Mont d’Or, is certainly open to criticism. His diagrammatic scheme of the “registers” is also an improvement, inasmuch as it allows for the possibility of certain notes being common to two registers. The value of the *voce mista* is very properly inculcated (page 215). A curious erroneous description of Behnke’s third breathing exercise appears on page 193, the correction of which is obvious. The hygienic and medical requirements of the voice-user are dilated on in several lessons full of a variety of pieces of information, which show the author’s all-round grasp of his subject. We question, however, whether it is advisable to include in a work addressed to non-medical persons so many purely professional matters, such as Brown-Séquard’s organic extracts, vibratory massage, polypoid hypertrophy of the posterior extremity of the inferior turbinated body (illustrated), etc., etc. Be that as it may, there are few open-minded students of vocal physiology and pathology who can peruse this work without finding something new, much rendered clearer, and all worth reading. The index and table of contents are quite “English;” the size, binding, paper, and type all that could be desired.

Dundas Grant.

Grünwald (München).—*Die Lehre von den Nasenentzündungen.* (“On Nasal Suppurations.”) Second completely revised Edition. With eight illustrations, two plates, and one table. München: J. F. Lehmann. 295 pages. Price seven marks.

IN his preface to the second edition the author states that he cannot depart from the fundamental idea enunciated in the first edition of his book—that all suppurations of the nose are the organic expression of a reaction of the uttermost air passages to infection. This pervading principle, as well as that of seeking for foci of suppuration in cases of purulent nasal discharges and attacking such foci locally by appropriate surgical measures, recommends itself ever more strongly to him with increasing experience, and he notes with satisfaction the adoption of his views by an ever-widening circle of specialists. Like many rhinologists in this country, the author feels bound to complain of his critics attributing to him statements he has never made and views he has never held.

As the reviewer has been unable to find any notice of the first edition of this work in the JOURNAL OF LARYNGOLOGY, he thinks the importance of the book justifies him in giving a short account of its contents.

In the chapter on diffuse suppuration of the nose, while conceding the possibility of such an occurrence, the author cannot sufficiently emphasize the fact that since he has practised complete systematic rhinoscopic

examination in adults he has never been able to exclude all focal sources of suppuration; while, on the contrary, he has been able, in a series of cases which had been diagnosed as diffuse suppuration of mucous membrane by other specialists, to find definite focal lesions (*viz.* accessory sinus disease). Diffuse secretion of pus is also very rare in children, and then only in connection with acute infectious diseases. The author lays down the axiom that not until disease of even the smallest of these (accessory) cavities has been excluded with certainty should the diagnosis of a general suppurative catarrh of the nasal mucous membrane be assumed.

Grünwald gives an historical account of our knowledge on the etiology of focal suppurations in the nose, both acute and chronic. Two-thirds of his own ninety-eight cases of antral empyema were of other than dental origin.

In the chapter on pathological anatomy the author attempts, and with great success, to bring clinically observed facts into line with, and to explain them by, the principles of universal general pathology, and in so doing, to remove to a large extent the clouds which have so long obscured intranasal morbid changes—especially, perhaps, in our own country. The reader will find systematic accounts of the different morbid conditions which have been observed in a large number of diseased accessory cavities collected and arranged in a most instructive manner. The remarks on inflammation of bone, as observed in the nose, are worthy of close consideration.

Under symptomatology Grünwald devotes thirty-eight pages to the “*ozæna*” question, and, after detailed enquiry into the origin of the secretion, and the cause of stench and crust formation, concludes (1) that in *ozæna* a secretion of pus from the whole surface of the nasal mucosa has never been proved, while, on the contrary, in a large series of cases the source of the pus in local foci of disease has been conclusively demonstrated, and in many others has appeared highly probable; (2) that crust formation and stench come about under varying circumstances; (3) that though these latter phenomena may co-exist, either may occur alone, and that with, or without, atrophy of the mucous membrane.

With reference to polypi, it is maintained that these in the majority of cases are quite pathognomonic of accessory sinus empyema or localized pus formation in the nasal passages. Although much evidence is adduced in favour of his view, this conclusion is probably more open to question than any other in his work.

The author passes on to deal with the effects of purulent nasal discharges on the skin and on the mucous membranes; he also considers the disturbances of sensation, vision, smell, and taste due to nasal suppurations.

The extension of suppurative inflammations from the nose to the orbit, the cranium, the meninges, the venous sinuses, the brain proper, the neck, etc., and pyæmic and septicæmic metastases, are dealt with in a thorough manner, and copiously illustrated with details of cases.

Under “methods of examination,” special stress is laid on the routine

use of the probe, and on the necessity of *repeated* examination to form an accurate and full opinion on any given case. The author warns the surgeon against all-sufficiency, and the specialist against timorous inaction, urging that one drop of certainty is worth more than a tubful of bad or good possibilities.

The author finds an enlarged, or, in narrow noses, even a normal sized middle turbinated body, a frequent hindrance to the escape of pus; and in cases in which the observer is certain that the same is an important and otherwise unsurmountable obstacle, he advises the consideration of its complete or partial removal, and describes his methods of doing this. His methods and instruments for doing this have now been repeatedly tested by the reviewer, and with highly satisfactory results.

In the second part of the work, dealing with affections of the separate sinuses, and the different parts of the nasal framework, Grünwald gives an account, brought quite up to date, of what is known on the matter, and illustrates the subject with cases and statistics from his own and others' practice.

For opening the frontal sinus he prefers the lateral incision below the eyebrow at the inner angle of the orbit. In this he will hardly have the support of English rhinologists, who now prefer the mid-line incision as giving better access to either sinus, or both, if necessary, from the one incision; whereas the scar is no more, but rather less, conspicuous than the lateral.

The second edition contains a suggestive appendix on the relation of syphilis and tuberculosis on the one hand to nasal suppurations on the other, and an addendum on certain recently published cases and papers which throw light or bear on points referred to in the body of the work. The volume concludes with a useful bibliography, which is, however, incomplete—*e.g.*, Mr. Charters Symonds' instructive contribution (with cases) on accessory sinus disease ("Brit. Med. Journ.," Vol. II., 1894) is ignored, though more recent references are given.

The reviewer would urge those of his specialist *confrères* who have not already done so, to read and ponder over the rich store of clinical facts, critical arguments, and practical suggestions with which the work bristles, and which no review can do justice to. Every rhinologist will find in this volume a powerful aid to the better comprehension of that which lays before him in his daily work, and a stimulus to persevere in a rational therapeutics. And what is more, no conscientious practitioner of the healing art can afford to ignore the observations here brought together, and treated in such a masterly way that the work may be said to mark an epoch in the development of scientific rhinology.

Scanes Spicer.

Treupel, Gustav.—*Die Bewegungstörungen im Kehlkopfe bei Hysterischen.* ("Motor Disturbances of the Larynx in Hysteria.") Jena: Gustav Fischer. 1895.

UNDER the above title Dr. Treupel discusses spasm of the glottis, nervous cough, disturbances of laryngeal co-ordination, and functional aphonia, in so far as these conditions occur as manifestations of hysteria.

Spasm of the glottis, he thinks, is, on the whole, rare in hysteria, and when present is usually associated with other forms of spasm; but it may

be the first and perhaps the only symptom of the disease. He rejects the idea that such spasms may arise in otherwise healthy people from an abnormal reflex excitability, and maintains that such an over-excitability is always evidence of hysteria.

Among the causes of nervous cough, whether paroxysmal or continuous, hysteria stands first. The hysterical nature of the continuous form the author regards as proved by the success which follows its treatment by moral discipline and methodical exercises in breathing, in opposition to Schroetter, who has described it under the name "*chorea laryngis*," and has expressly separated it from hysterical affections.

Under "*co-ordination disturbances during respiration*"—the functional inspiratory glottic spasm of Gottstein—two cases observed by the author are recorded to illustrate this rare and somewhat obscure condition. In one of them tracheotomy had to be performed and the canula retained for a long time. As the patient had an enlargement of the thyroid gland and was suffering from pulmonary phthisis, one cannot help entertaining a doubt as to the hysterical nature of the spasm.

Much the larger part of the book is taken up with the consideration of aphonia spastica and hysterical aphonia, between which conditions the author maintains there is no fundamental difference. In both we have to do with a faulty innervation of the phonatory muscles, the nerve impulse in the former being too strong and in the latter too weak. In the same patient we may see the two forms rapidly alternating, so that at one moment we have a spastic, at another a paralytic aphonia. In this connection Dr. Treupel has made a number of observations on healthy persons, in whom he was able to reproduce at will the laryngoscopic appearances of spastic and of hysterical aphonia.

From these experiments he concludes "that the laryngeal motor disturbances in hysteria are merely modifications of normal movements, which can be performed by healthy persons after sufficient practice. The hysterical differs from the healthy person in that in the former the peculiar movements which have been accidentally acquired (for example, as the result of a fright) are permanently retained through the influence of a disordered imagination." Dr. Treupel recognizes that he has not yet completely established this position, as he has not been able to find a healthy person who could move one vocal cord at will, though in hysterical aphonia the paresis is often markedly one-sided. But he records a case of left abductor paralysis due to hysteria in which he was able to reproduce artificially an approach to the original laryngoscopic appearance three years after the paralysis had been cured. He is also convinced of the possibility of some persons being able to produce one-sided laryngeal movements.

The bearing of these observations on treatment is obvious. The cure of hysterical motor disturbances in the larynx does not lie in the administration of medicines, the employment of electrical stimulation, or in removing diseased conditions of the throat and nose, but in moral treatment, along with systematic exercises in breathing and phonation, so as "to bring back the will impulses into the normal channels."

His results from this line of treatment in hysterical aphonia are

certainly very good. In only one case out of seventy did he fail to restore the voice at the first sitting, and in nearly all the result was permanent. It is to be noted, however, that in the one case in which this method failed the intralaryngeal application of electricity was successful.

It is to be regretted that Dr. Treupel, in a work containing many valuable observations, has adopted an arrangement of the subject which necessitates much repetition, and so becomes at times tedious to the reader.

Middlemass Hunt.

Books and Magazines received.

Boletini du Sociedade de Medicina e Cirurgia de São Paulo. Pres. Luiz Pereira Barreto.

The Missouri Sanitarian. St. Louis, Mo., U.S.A.

The Natural Arsenical Waters of La Bourboule. By A. M. Brown, M.D. The Sanitary Publishing Company.

Canada Medical Record. Vol. XXIV. January, 1896. J. Lovell & Sons, 23, St. Nicholas Street. Montreal.

The Australasian Medical Gazette. January, 1896. British Medical Association, 121, Bathurst Street. Sydney.

Bulletin de la Société Belge d'Otologie.

The Medical Annual. Wright & Sons. Bristol.

NEW PREPARATIONS.

COMPOUND CAFFEINE TABLOIDS (Burroughs, Wellcome & Co.).

NOTES.

It has been considered advisable for the future to issue the JOURNAL in two parts, or volumes, a year, on account of its increased bulk. The present volume will end with the June number, and the indices will appear in January and July.

THE Rebman Publishing Company, Limited, 11, Adam Street, Strand, have in the press for publication a serial work exemplifying the uses of the new photography in medical and surgical diagnosis, entitled, "Archives of Clinical Skiagraphy," by Sydney Rowland, B.A. The

first part will consist of six collotypes, illustrating cases in which the method has been successfully applied to elucidating obscure injuries to various parts of the body. The first plate is a skiagram of the complete osseous system of a full-grown child—the largest subject which has been done.

A NEW special society has been organized in America, viz., the American Laryngological, Rhinological, and Otological Society. It has originated, we believe, in the desire to extend the field of work presided over in America by the American Laryngological Association and now becoming so widespread in the States, the growth of the specialties being exceedingly rapid and requiring more than one society for all its followers. Drs. Lennox Browne, McNeil Whistler, Wolfenden, Grant, and Macintyre have been elected honorary Fellows.

BIBLIOGRAPHY.

ŒSOPHAGUS.

MANN, D. Colloid cancer of œsophagus. *Brit. Med. Journ.*, 1895, Vol. II., p. 1616.

ROLLESTON, H. D. Dilatation of œsophagus. *Brit. Med. Journ.*, 1895, Vol. II., p. 1425.

SCHRAMM, H. Fall von Œsophagotomie bei einem einjährigen Kinde. *Wien. Med. Woch.*, 1895, No. 50.

LARYNX, TRACHEA, &c.

DUKE, E. T. Whooping cough. *New York Med. Journ.*, Vol. LXII., p. 596.

FARLOW, J. W. Polypoid lipoma of the larynx. *New York Med. Journ.*, Vol. XLII., pp. 610, 631.

FERROS. Un cas d'hémorrhagie laryngée simulant une hémoptysie. *Archiv. de Laryng.*, July and Aug., 1895.

FISCHER, L. Treatment of pulmonary tuberculosis. *New York Med. Journ.*, Vol. LXII., p. 193.

FISCHER, G. TH. Ein weiterer Beitrag zur Chininbehandlung des Keuchhustens. *Berl. Klin. Woch.*, 1895, No. 33.

GLEITSMANN, J. W. Surgical treatment of laryngeal tuberculosis. *New York Med. Journ.*, Vol. LXII., pp. 495, 504.

GRIFFIN, E. H. Condylomata of the trachea. *New York Med. Journ.*, Vol. LXII., p. 627.

GUTZMANN, H. Ueber die Veränderungen der Sprache bei angeborenen Gaumendefekten und ihre Heilung. *Berl. Klin. Woch.*, 1895, No. 39.

HEYMANN. Adhérences et rétrécissements pharyngiens et laryngiens dans la syphilis. *Archiv. de Laryng.*, March and April, 1895.

HODGKINSON, A. Vibrations of the vocal cords. *Brit. Med. Journ.*, 1895, Vol. II., p. 482.

HODGKINSON, A. Functions of laryngeal ventricles and ventricular bands. *Brit. Med. Journ.*, 1895, Vol. II., p. 1023.

HODGKINSON, A. Early radical treatment of malignant disease of larynx. *Brit. Med. Journ.*, 1895, Vol. II., p. 1035.

HODGKINSON, A. Chorditis tuberosa. *Brit. Med. Journ.*, 1895, Vol. II., p. 1099.

HUBBARD, D. L. Chronic catarrhal laryngitis. *New York Med. Journ.*, Vol. LXII., p. 176.

ILINGWORTH, C. R. Points in anatomy and physiology of larynx. *Brit. Med. Journ.*, 1895, Vol. II., p. 483.

ILINGWORTH, C. R. Functions of laryngeal ventricles, etc. *Brit. Med. Journ.*, 1895, Vol. II., p. 1024.

KIRSTEIN, A. Autoskopie der Larynx und der Trachea. *Berl. Klin. Woch.*, 1895, No. 22.

LAGAHUZÈRE. Contribution à l'étude de l'herpès du larynx. Thèse de Bordeaux, 1895.

LAWRENCE, L. Early radical operation in malignant disease of the larynx. *Brit. Med. Journ.*, 1895, Vol. II., p. 1035.

LEVY, R. The treatment of laryngeal tuberculosis. *New York Med. Journ.*, Vol. LXII., p. 74.

LOEB, H. W. Experiences with Paquin's antitubercle serum in the treatment of laryngeal tuberculosis. *New York Med. Journ.*, Vol. LXII., p. 425.

LUBLINSKI. Des paralysie laryngées dans la fièvre typhoïde. *Ann. de l'Oreille*, April, 1895.

MACKENZIE, H. Cystic tumour of the larynx. *Lancet*, 1895, Vol. II., p. 1426.

MACKENZIE, J. N. Early radical treatment of malignant disease of larynx. *Brit. Med. Journ.*, 1895, Vol. II., p. 1035.

MACNALT, F. C. Tracheotomy in apparent death from chloroform. *Brit. Med. Journ.*, 1895, Vol. II., p. 1189.

MANDELSTAMM. Un cas d'aphonie hystérique. *Ann. de l'Oreille*, Aug., 1895.

MENDEL. Note sur un cas de paralysie laryngée tabétique. *Arch. de Laryng.*, Jan. and Feb., 1895.

MILLIGAN, W. Vocal defects among School Board teachers, and teachers' nodes. *Brit. Med. Journ.*, 1895, Vol. II., p. 1097.

MITCHELL, D. Death from presence of vomited matter in larynx. *Brit. Med. Journ.*, 1895, Vol. II., p. 1610.

MORGAN, J. H. Foreign body impacted for forty-six days in left bronchus. *Lancet*, 1895, Vol. II., p. 769.

MOURE. Périchondrite laryngo-trachéale avec abcès. *Rev. de Laryng.*, July 15, 1895.

NOQUET. Un cas de kyste de l'épiglotte. *Rev. de Laryng.*, Aug. 1, 1895.

PÉAN. Ablation totale du larynx, de la portion supérieure de l'œsophage, et de la moitié inférieure du pharynx, faite avec le Dr. Fauvel, et restauration de ces organes avec un appareil prothétique construit sur ces indications par le Dr. Michael. *Archiv. de Laryng.*, May and June, 1895.

PORCHER, W. P. Thyrotomy for epithelioma. *New York Med. Journ.*, Vol. LXII., p. 50.

PORGET. Du traitement des nodules des chanteurs. *Archiv. de Laryng.*, May and June, 1895.

PORTER, W. Compensatory arytenoid movement. *New York Med. Journ.*, Vol. LXII., p. 212.

PRIESTER, I. Ein Fall von protrahirtem atypischem Spasmus Glottidis—Tetania Laryngis. *Wien. Med. Woch.*, 1895, No. 29.

- RAUGÉ. Sur la classification des troubles neuro-moteurs du larynx. *Archiv. Laryng.*, May and June, 1895.
- RAUGÉ. Rapport sur les troubles neuro-moteurs du larynx. *Rev. Mens. de Laryng.*, May 15, 1895.
- RICE, C. C. The diagnosis of tuberculosis of the upper air passages. *New York Med. Journ.*, Vol. LXII., pp. 490, 540.
- RUSSELL, R. Representation of abduction of vocal cords in the cerebral cortex. *Brit. Med. Journ.*, 1895, Vol. II., p. 480.
- SCHMIDT. Functions of laryngeal ventricles, etc. *Brit. Med. Journ.*, 1895, Vol. II., p. 1024.
- SECRETAN. Herpès laryngée. *Ann. de l'Oreille*, Aug., 1895.
- SEMON, F. Functions of laryngeal ventricles, etc. *Brit. Med. Journ.*, 1895, Vol. II., p. 1024.
- SEMON, F. Early radical treatment of malignant disease of larynx. *Brit. Med. Journ.*, 1895, Vol. II., p. 1034.
- SPICER, S. Early radical treatment in malignant disease of larynx. *Brit. Med. Journ.*, 1895, Vol. II., p. 1035.
- WADE, A. B. Tamarind stone in the bronchus. *Lancet*, 1895, Vol. II., p. 1499.
- WOODS, H. Early radical treatment in malignant disease of larynx. *Brit. Med. Journ.*, 1895, Vol. II., p. 1035.
- WRIGHT, J. Tuberculosis of the upper air passages. *New York Med. Journ.*, Vol. LXII., p. 363.
- YONGE, E. S. Chorditis tuberosa. *Brit. Med. Journ.*, 1895, Vol. II., p. 1563.

THYROID, &c.

- ABRAM, J. H. Exophthalmic goitre. *Brit. Med. Journ.*, 1895, Vol. II., p. 1040.
- ADAM, J. H. The theory and treatment of exophthalmic goitre. *Lancet*, 1895, Vol. II., pp. 1047, 1221.
- ASHNEAD, A. S. The etiology and natural cure of goitre. *New York Med. Journ.*, Vol. LXII., p. 241.
- BARKER, A. E. J. Surgical treatment of tumours of thyroid. *Brit. Med. Journ.*, 1895, Vol. II., p. 905.
- BATHURST, L. W. Graves' disease associated with idiopathic muscular atrophy. *Lancet*, 1895, Vol. II., p. 529.
- BERRY, J. Surgical treatment of tumours of thyroid. *Brit. Med. Journ.*, 1895, Vol. II., p. 904.
- BRISSAUD. Corps thyroïde et maladie de Basedow. *Arch. Clin. de Bordeaux*, July, 1895.
- BROWN, W. H. Enucleation of thyroid cysts. *Lancet*, 1895, Vol. II., p. 722.
- BRUNET. Du traitement du goitre parenchymateux par les injections de teinture d'iode. *Arch. Clin. de Bordeaux*, Feb., 1893.
- BUTLIN, T. H. Surgical treatment of tumours of thyroid. *Brit. Med. Journ.*, 1895, Vol. II., pp. 901, 906.
- CATHCART, C. W. Surgical treatment of tumours of thyroid. *Brit. Med. Journ.*, 1895, Vol. II., p. 906.
- DOMINICIS, N. Zur Physiologie der Thyreoidea. *Wien. Med. Woch.* 1895, Nos. 38, 39.
- EDMUNDS. Cystic accessory thyroid. *Lancet*, 1895, Vol. II., p. 1292.
- FOXWELL, A. Abnormalities of the brain in exophthalmic goitre. *Lancet*, 1895, Vol. II., p. 302.
- FRAENKEL. Thyro-antitoxin. *Lancet*, 1895, Vol. II., p. 1465.

GAIDE. Du traitement thyroïdien dans le goitre, le myxœdème, et le crétinisme, et en particulier dans le crétinisme endémique. Thèse de Bordeaux, 1895.

GAMGEE, L. Operation for thyroid tumour. *Lancet*, 1895, Vol. II., p. 1111.

GIMLETTE, J. G. Myxœdema and the thyroid gland. *Brit. Med. Journ.*, 1895, Vol. II., p. 1166.

HAIG, A. Thyroid extracts in myxœdema complicated by angina pectoris. *Lancet*, 1895, Vol. II., p. 873.

HASKOVEC, L. Ein Fall von Sporadischem Cretinismus behandelt mit einem Schilddrüsenpräparat. *Wien. Med. Woch.*, 1895, Nos. 43, 44.

HOLMES, G. Sporadic goitre. *Lancet*, 1895, Vol. II., p. 1155.

INGALS, E. F., and OHLS, H. G. The treatment of exophthalmic goitre by thyroid extracts and desiccated thyroids. *New York Med. Journ.*, Vol. LXII., pp. 245, 302.

JESSOP, W. H. H. Three cases of exophthalmic goitre with severe ocular lesions. *Brit. Med. Journ.*, 1895, Vol. II., p. 1296.

KEEN, W. W. Surgical treatment of tumours of thyroid. *Brit. Med. Journ.*, 1895, Vol. II., p. 904.

KEETLY, C. B. Surgical treatment of tumours of thyroid. *Brit. Med. Journ.*, 1895, Vol. II., p. 905.

LIARAS. Tumeur de la région thyro-hyoïdienne. *Journ. de Méd. de Bordeaux*, Feb. 10, 1895.

LICHTWITZ. Fistule bronchiale du cou guérie par l'électrolyse. *Archiv. d'Electricité Méd.*, April 4, 1895.

MAGNUS-LEVY, A. Ueber den respiratorischen Gaswechsel unter dem Einfluss der Thyreoidea sowie unter verschiedenen pathologischen Zuständen. *Berl. Klin. Woch.*, 1895, No. 30.

MAUDE, A. Mental symptoms in relation to exophthalmic goitre. *Brit. Med. Journ.*, 1895, Vol. II., p. 766.

MORISON, R. Surgical treatment of thyroid tumours. *Brit. Med. Journ.*, 1895, Vol. II., p. 903.

MORRIS, H. C. L. Notes on the etiology of goitre. *Brit. Med. Journ.*, 1895, Vol. II., p. 13.

MUNSON, E. L. The occurrence of goitre among the Indians of the United States. *New York Med. Journ.*, Vol. LXII., p. 513.

PATERSON. Cases of Graves' disease without exophthalmos. *Lancet*, 1895, Vol. II., p. 1506.

RÉGIS. Nouveau cas de myxœdème infantile notablement amélioré par le traitement thyroïdien. *Journ. de Méd. de Bordeaux*, June 2, 1895.

RÉGIS. Un cas de myxœdème congénitale au début du traitement thyroïdien. *Journ. de Méd. de Bordeaux*, 13 Jan., 1895.

STEVENSON, L. E. The cause of goitre. *Lancet*, 1895, Vol. II., p. 1536.

SYMONDS, C. J. Surgical treatment of tumours of thyroid. *Brit. Med. Journ.*, 1895, Vol. II., p. 904.

THOMAS, W. T. Surgical treatment of tumours of thyroid. *Brit. Med. Journ.*, 1895, Vol. II., p. 905.

NECK AND VARIOUS.

CASTEX. Exposé critique de quelques cas rares. *Rev. de Laryng.*, July 1, 1895.

LIARAS. Kyste congénitale du cou. *Journ. de Méd. de Bordeaux*, Feb. 10, 1895.

RIPAULT. Un cas d'angine de Ludwig. *Ann. de l'Oreille*, Sept., 1895.

RUTTEN. Présentation d'une malade guérie d'un syphilome énorme de la paroi latérale droite de la gorge et du cou. *Ann. de l'Oreille*, Sept., 1895.

TROQUART. Deux cas d'adéno-phlegmon du cou consécutive à une angine. *Journ. de Méd. de Bordeaux*, 9 June, 1895.

VACHER. Note sur quelques instruments nouveaux. *Ann. de l'Oreille*, July, 1895.

EARS.

ALTSCHUL, A. Beitrag zur Casuistik der Taucherkrankheiten. *Wien. Med. Woch.*, 1895, Nos. 47, 48.

ARMITAGE, E. Removal of an insect from the ear. *Lancet*, 1895, Vol. II., p. 913.

BACON. Cas d'otite moyenne suppurative aiguë et d'affection mastoïdienne compagne de glycosurie, et de ce qu'on appelle un erysipèle "blanc" occupant le cuir chevelu; opération; guérison. *Rev. Mens. de Laryng.*, 15 April, 1895.

BALANCE, C. A. Cerebral complications in middle-ear disease. *Brit. Med. Journ.*, 1895, Vol. II., p. 1231.

BARBER, E. C. Turbinotomy in deafness and tinnitus aurium. *Brit. Med. Journ.*, 1895, p. 1290.

BARBER, E. C. Objective pulsating tinnitus. *Brit. Med. Journ.*, 1895, Vol. II., p. 1293.

BARR, T. Treatment of nerve deafness. *Brit. Med. Journ.*, 1895, Vol. II., p. 1222.

BARR, T. Treatment of intractable otitis media by mastoid operation. *Brit. Med. Journ.*, 1895, Vol. II., p. 1226.

BARR, T. Cerebral complications in middle-ear disease. *Brit. Med. Journ.*, 1895, Vol. II., p. 1231.

BARR, T. Rotatory sensations in labyrinthine disease. *Brit. Med. Journ.*, 1895, Vol. II., p. 1291.

BARZ, T. Giddiness or staggering in ear disease. *Brit. Med. Journ.*, 1895, Vol. II., p. 1608.

BEAN, C. E. Otorrhoea and some of its complications. *Lancet*, 1895, Vol. II., p. 1171.

BENNETT. Treatment of nerve deafness. *Brit. Med. Journ.*, 1895, Vol. II., p. 1222.

BLACK, J. Cerebral complications in middle-ear disease. *Brit. Med. Journ.*, 1895, Vol. II., p. 1231.

BRONNER, A. Otorrhoea; its complications and their treatment. *Lancet*, 1895, Vol. II., p. 987.

BRONNER, A. Operations on the mastoid process. *Lancet*, 1895, Vol. II., p. 1159.

BRONNER, A. Turbinotomy in deafness and tinnitus aurium. *Brit. Med. Journ.*, 1895, Vol. II., p. 1290.

BRONNER, A. Rotatory sensations in labyrinthine disease. *Brit. Med. Journ.*, 1895, Vol. II., p. 1291.

BRONNER, A. Five cases of attic disease treated by modified Stacke's operation. *Brit. Med. Journ.*, 1895, Vol. II., p. 1293.

BULL, C. S. Reports on otology. *New York Med. Journ.*, Vol. LXII., p. 121.

CHIPAULT et DEMOULIN. Les méfaits de l'incision de Wilde. *Ann. de l'Oreille*, April, 1895.

COCKERIL. De la restauration du pavillon de l'oreille. *Rev. Mens. de Laryng.*, 1 and 15 Feb., 1895.

CONETOUX. Du pensemment de l'otite moyenne purulente chronique. *Ann. de l'Oreille*, Oct., 1895.

CORRADI. Les sténoses rebelles de la portion cartilagineuse du conduit auditif externe et de leur traitement. *Ann. de l'Oreille*, April, 1895.

COURTADE. Observation d'occlusion du conduit auditif; opération. *Ann. de l'Oreille*, Dec., 1895.

COYNE et CANNIEN. Recherches sur l'épithélium sensoriel de l'organe auditif. *Ann. de l'Oreille*, May, 1895.

COYNE et CANNIEN. Recherches sur la membrane de Corti. *Ann. de l'Oreille*, May, 1895.

DALBY, SIR W. Presidential address—section of otology. *Brit. Med. Journ.*, 1895, Vol. II., p. 1219.

DALBY, SIR W. Case of pulsatory tinnitus. *Brit. Med. Journ.*, 1895, Vol. II., p. 1219.

DALBY, SIR W. Treatment of nerve deafness. *Brit. Med. Journ.*, 1895, Vol. II., p. 1223.

DALBY, SIR W. Cerebral complications in middle-ear disease. *Brit. Med. Journ.*, 1895, Vol. II., p. 1231.

DELSTANCHE. Vaseline in affections of the middle ear. *Lancet*, 1895, Vol. II., p. 879.

ESCAT. De l'otite moyenne aiguë supprimée avec voussure du secteur postéro-supérieur du tympan. *Arch. de Laryng.*, July and Aug., 1895.

FIELD, G. P. Treatment of nerve deafness. *Brit. Med. Journ.*, 1895, Vol. II., p. 1222.

FOUGERAY. Traitement antiseptique des suppurations chroniques simples de la caisse du tympan, du tamponnement méthodique du conduit auditif externe par le gaze iodoformée. *Ann. de l'Oreille*, June, 1895.

FREUDENTHAL, W. Electro-vibratory massage in ear, nose, and throat. *New York Med. Journ.*, Vol. LXII., p. 397.

GELLÉ. Le torticollis ab aure lœsa. *Ann. de l'Oreille*, April, 1895.

GELLÉ. Les œdèmes phlegmoneux sous-cutanés périotiques. *Ann. de l'Oreille*, June, 1895.

GELLÉ. Du traitement général dans les affections auriculaires. *Ann. de l'Oreille*, Oct., 1895.

GINESTET. Contribution à l'étude des traumatismes de l'oreille moyenne. Thèse, Bordeaux, 1895.

GUYE. Undescribed form of rotatory sensation in labyrinthine disease. *Brit. Med. Journ.*, 1895, Vol. II., pp. 1290, 1291.

GUYE. Ménière's disease. *Brit. Med. Journ.*, 1895, Vol. II., p. 1292.

JANSEN, A. Optische Aphasie bei einer otitischen eitrigen Entzündung der Hirnhäuten am linken Schläfenlappen mit Ausgang in Heilung. *Berl. Klin. Woch.*, 1895, No. 35.

JONES, D. L. Treatment of nerve deafness. *Brit. Med. Journ.*, 1895, Vol. II., p. 1222.

JONES, H. M. Treatment of nerve deafness. *Brit. Med. Journ.*, 1895, Vol. II., p. 1221.

JONES, H. M. Turbinotomy for deafness and tinnitus aurium. *Brit. Med. Journ.*, 1895, Vol. II., p. 1290.

JONES, H. M. Ménière's disease. *Brit. Med. Journ.*, 1895, Vol. II., p. 1291.

JONES, H. M. Hyperæsthesia and acoustica. *Brit. Med. Journ.*, 1895, Vol. II., p. 1292.

LACARRET. Cholestéatome de l'oreille moyenne. Trajet fistuleux. Vertige de Ménière. *Rev. de Laryng.*, 1 July, 1895.

LAKE, R. Anatomical connections of membrana tympani. *Brit. Med. Journ.*, 1895, Vol. II., p. 1292.

- LANNOIS. Rupture du tympan chez un pendu. *Rev. de Laryng.*, 1 July, 1895.
- LANNOIS. Rupture du tympan chez un pendu. *Ann. de l'Oreille*, June, 1895.
- LAW, E. Treatment of nerve deafness. *Brit. Med. Journ.*, 1895, Vol. II., p. 1222.
- LAW, E. Anatomical connections of membrana tympani. *Brit. Med. Journ.*, 1895, Vol. II., 1293.
- LEMAIREY. Syndrome de Ménière guérie par pilocarpine. *Ann. de l'Oreille*, Oct., 1895.
- LERMOYEZ et HELME. De l'asepsie en otologie, rhinologie, et laryngologie. *Ann. de l'Oreille*, June, 1895.
- LERMOYEZ et HELME. À propos du rôle des staphylocoques dans l'otorrhée. *Ann. de l'Oreille*, July, 1895.
- LUC. Cerebral complications in middle-ear disease. *Brit. Med. Journ.*, 1895, Vol. II., 1229.
- LUC. Présentation d'une malade opérée d'ouverture attico-mastoidienne pour une ostéite fongueuse ancienne, avec application de lambeaux cutanés sur la brèche osseuse. *Archiv. de Laryng.*, Jan and Feb., 1895.
- LUC. Résultats d'une série de quatorze cas d'ouverture large des cavités de l'oreille moyenne par la méthode Stacke-Zaufal, pour la cure radicale d'otorrhées rebelles. *Arch. de Laryng.*, May and June, 1895.
- MACEWEN, W. Cerebral complications in middle-ear disease. *Brit. Med. Journ.*, 1895, Vol. II., pp. 1228, 1231.
- MACMUNN, J. Chloride of ammonia vapour in middle-ear disease. *Brit. Med. Journ.*, 1895, Vol. II., p. 971.
- MAX, E. Zur pulverbearbeitung des Ohres, Nasenrachenraumes, und Kehlkopfes. *Wien. Med. Woch.*, 1895, No. 36.
- MCBRIDE, P. Cerebral complications in middle-ear disease. *Brit. Med. Journ.*, 1895, Vol. II., p. 1230.
- MENDEL, A. Ueber den Schwindel. *Berl. Klin. Woch.*, 1895, No. 26.
- MILLIGAN, W. Treatment of nerve deafness. *Brit. Med. Journ.*, 1895, Vol. II., p. 1222.
- MILLIGAN, W. Tuberculosis of middle ear and adnepsa. *Brit. Med. Journ.*, 1895, Vol. II., p. 1223.
- MILLIGAN, W. Treatment of intractable suppurative otitis media by mastoid operation. *Brit. Med. Journ.*, 1895, Vol. II., p. 1228.
- MILLIGAN, W. Tuberculous disease of middle ear. *Brit. Med. Journ.*, 1895, Vol. II., p. 1564.
- MIOT et HERCK. Des bourdonnements d'oreille. *Rev. de Laryng.*, 1 June, 1895.
- PASSOW, ST. A. Fall von perisinuösen Abscess und Sinusthrombose mit Ausgang in Heilung. *Berl. Klin. Woch.*, 1896, No. 48.
- PEGLER, H. Turbinotomy for deafness and tinnitus aurium. *Brit. Med. Journ.*, 1895, Vol. II., p. 1290.
- PES et GRADENIGO. Les staphylocoques pyogènes dans les otites moyennes aiguës et chroniques, et en particulier de leur mode de traitement. *Ann. de l'Oreille*, July, 1895.
- PEYSER, A. Ueber partielle klonische Krämpfe des Gaumensegels bei gleichzeitiger Facialisparese in Anschluss an einen Ohrenaffection. *Berl. Klin. Woch.*, 1895, No. 43.
- PITTS, B. Operation for thrombosis of lateral sinus. *Lancet*, 1895, Vol. II., p. 332.
- POLITZER, A. Pathological changes of the labyrinth. *Lancet*, 1895, Vol. II., p. 975.

- POLITZER. Eloge du Professeur Moos. *Ann. de l'Oreille*, Oct., 1895.
- PRITCHARD, U. Cerebral complications in middle-ear disease. *Brit. Med. Journ.*, 1895, Vol. II., p. 1230.
- PRITCHARD, U. Turbinotomy for deafness and tinnitus aurium. *Brit. Med. Journ.*, 1895, Vol. II., p. 1290.
- PRITCHARD, U. Rotatory sensation in labyrinthine disease. *Brit. Med. Journ.*, 1895, Vol. II., p. 1291.
- PRITCHARD, U. Ménière's disease. *Brit. Med. Journ.*, 1895, Vol. II., p. 1292.
- ROBERTS, W. Cerebral complications in middle-ear disease. *Brit. Med. Journ.*, 1895, Vol. II., p. 1231.
- SCATLIFFE, J. M. The pneumatic speculum in disease of the ear. *Brit. Med. Journ.*, 1895, Vol. II., p. 1294.
- SHIELD, A. M. Cerebral complications in middle-ear disease. *Brit. Med. Journ.*, 1895, Vol. II., p. 1230.
- SILBERSTERN, P. Zur Casuistik der Caissonkrankheit. *Wien. Med. Woch.*, 1895, No. 30.
- SPICER, F. Turbinotomy in deafness and tinnitus aurium. *Brit. Med. Journ.*, 1895, Vol. II., p. 1290.
- STRANGWAYS, W. F. Deafness: What are we doing to prevent it? *New York Med. Journ.*, Vol. LXII., p. 110.
- SZENES. Sur la valeur thérapeutique de l'euphrène de l'alumol, de la diaphtérine, et de l'antiseptine dans les suppurations de l'oreille. *Ann. de l'Oreille*, Feb., 1895. (Eleventh Congress of Medicine, Rome.)
- SZENES. Deux cas de surdité guérie. *Ann. de l'Oreille*, Mar., 1895. (Eleventh International Congress, Rome.)
- SZENES. Sur un cas rare d'otite externe d'origine infectieuse. *Ann. de l'Oreille*, Oct., 1895.
- SZENES. Devons-nous dans des cas aigus, nous prononcer pour ou contre l'ouverture de l'apophyse mastoïde. *Ann. de l'Oreille*, Oct., 1895.
- VACHER. Note sur un cas d'otite moyenne double avec accidents cérébraux. *Rev. de Laryng.*, 15 June, 1895.
- WAINWRIGHT, L. Addition to the aural speculum. *Brit. Med. Journ.*, 1895, Vol. II., p. 1504.
- WARDEN, C. Treatment of nerve deafness. *Brit. Med. Journ.*, 1895, Vol. II., p. 1222.
- WARDEN, C. Turbinotomy in deafness and tinnitus aurium. *Brit. Med. Journ.*, 1895, Vol. II., p. 1290.
- WEEKS, C. C. Mastoid disease in a child. *Brit. Med. Journ.*, 1895, Vol. II., p. 1611.
- WILKS, H. L. E. Bluebottle larvæ in ear. *Brit. Med. Journ.*, 1895, Vol. II., p. 779.
- WOODS, H. Treatment of nerve deafness. *Brit. Med. Journ.*, 1895, Vol. II., p. 1222.
- WOODS, H. Cerebral complications of middle-ear disease. *Brit. Med. Journ.*, 1895, Vol. II., p. 1231.
- ZIEM. Sur les conditions de pénétration de la trompe d'Eustache par des lavages du nez, et sur une nouvelle pompe foulante. *Ann. de l'Oreille*, Mar., 1895.

THE JOURNAL OF LARYNGOLOGY, RHINOLOGY, AND OTOTOLOGY.

Original Articles are accepted by the Editors of this Journal on the condition that they have not previously been published elsewhere.

Twenty-five reprints are allowed each author. If more are required it is requested that this be stated when the article is first forwarded to this Journal. Such extra reprints will be charged to the author.

The Editors are not responsible for opinions expressed in original Articles or Abstracts in this Journal.

Editorial Communications are to be addressed to "Editors of JOURNAL OF LARYNGOLOGY, care of Rebman Publishing Company, Limited, 11, Adam Street, Strand, London, W.C."

SOCIETIES' MEETINGS.

THE BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION.

General Meeting, April 17th, 1896.

Dr. G. STOKER, M.R.C.P.I., *President, in the Chair.*

Dr. ADOLPH BRONNER. *A Few Words on the Symptoms and Treatment of Diseases of the Attic.*

The attic plays a very important part in connection with the diseases of the ear—partly because of its position (as it is practically directly continuous with the middle ear and mastoid cells), and partly because of its contents and of the arrangement of the same. We know that the attic contains the incus and the head of the malleus, and that it is divided into several cavities—often as many as seven—by the ligaments of the malleus and incus, and by the folds of mucous membrane which connect the ossicles with the walls of the attic. If inflammation has once spread into these cavities it rarely heals spontaneously, becomes chronic, and is most difficult to cure. This explains why the ossicles and walls of the attic so frequently become affected. Often there is an accumulation of thickened exudation or pus, or we may find a genuine cholesteatoma. Walb found caseous matter in the attic in forty-six out of sixty-five cases of perforation of Shrapnell's membrane. My own experience quite agrees with these figures. It is difficult to localize the exact seat of the disease. The position of the perforation, however, helps us to some extent. If it

is over the short process of the malleus, then the head of the malleus is affected; if behind, the long process of the incus; whereas, if the walls of the attic are diseased, there is a large perforation in the upper part of Shrapnell's membrane. In all cases of perforation of the pars tensa or lower part of the membrana tympani, in which ordinary treatment (removal of granulations, local applications, etc.) has failed to effect a cure in a few months, we can be nearly sure that the attic is diseased (especially in adults), and perhaps also the mastoid cells. In adults we nearly always find that if the mastoid cells are affected the attic is also diseased. This is of great importance in the surgical treatment of the mastoid process. It is the reason why Schwartz's original operation is sometimes unsuccessful, because we do not lay open and treat the diseased attic, and this afterwards keeps up the otorrhœa and often causes recurrence of the mastoid disease. We have to thank Kister, Bergman, and Stacke for drawing our attention to this important fact.

The symptoms of disease of the attic are chiefly objective. We in most cases find perforation of Shrapnell's membrane, or of the pars tensa, or of both, with or without granulations. If there is a fistula of Shrapnell's membrane the attic is sure to be diseased. We can have simple accumulation of pus, or a cholesteatoma, or caries of the ossicles or of the wall of the attic. Frequently granulation tissue projects through the perforation, and may attain large dimensions. Often we find a small dark crust, which covers the perforation, and is sometimes mistaken for a small piece of cerumen. These cases are frequently overlooked, and yet it is of great importance that they should be diagnosed, as the crust naturally causes retention of pus, and it very readily re-forms when removed.

We can also have disease of the attic without perforation of the membrana tympani. In my experience these cases are not at all uncommon. The patient complains of pain in or above the ear, of a feeling of fulness, not always of deafness. We find redness and slight bulging of Shrapnell's membrane, or of the upper part of the external meatus. Frequently, in chronic cases, there is swelling above the auricle, extending forwards and backwards as far as the apex of the mastoid process, and thus simulating disease of the antrum. I have recently operated on a man of thirty who for twenty years has had discharge from the ear. He has three times been operated on by Wilde's incision for mastoid disease. I was much surprised to find the mastoid process apparently normal, and a large cholesteatoma of the attic. The swelling extended down below the mastoid, and forward into the region of the temple.

Pain, of course, is a common symptom, and it varies with the nature of the case. I have seen several cases in which the only symptoms were frequent attacks of dull aching pain in the ear, with feeling of fulness, with slight bulging of Shrapnell's membrane. I incised—found caseous matter; scraped out and syringed with excellent results. Often there are gnawing and shooting pains, radiating chiefly upward and forward. In cases of mastoid disease with pain above the ear and towards the temple the attic should always be examined.

As regards treatment, I think that we should be guided by ordinary

surgical principles : enlarge the perforation, excise part of the membrana tympani (if necessary), remove any granulations, caseous matter, etc. by the curette and by syringing, apply chromic acid, also iodoform, aristol, etc., etc., in small quantities frequently (taking care, of course, that the perforation is kept well open). If the malleus and incus are diseased and loose they can be easily removed, but if they are firmly attached, or difficult to find it is best to wait awhile till they become loose and more easy to remove. We then do not incur the great risk of damaging the stapes, or facial or semicircular canals. I use Delstanche's, Hartmann's, or Milligan's irrigator for syringing out the attic, and Deistanche's new curette for removing the malleus. The latter is a most simple and useful instrument. I believe that if these simple methods of treatment were more thoroughly carried out we should not hear so much of the wonderful operations for removing the ossicles under chloroform or of opening up the attic. Out of forty-two private cases of perforation of Shrapnell's membrane I have only twice removed the ossicles under chloroform, and opened up the attic in ten cases. In the remaining thirty cases free incision, syringing, and scraping effected a cure. The incus is often dislocated or absent, and it is therefore not advisable to look for it too energetically. If these ordinary methods and the removal of the ossicles fail to effect a cure, or if the external meatus is too narrow to apply local treatment, we must open up and explore the attic. I make a long incision behind and round the top of the ear, downwards, up to the tragus ; cut through the cutaneous external meatus, and pull the whole ear downwards. The wound is dressed from above, and allowed to heal from below by granulations. There is very little deformity, and you retain a much better view of the diseased parts during the period of healing. If a permanent fistula has to be retained, it is, for obvious reasons, much more desirable that this should be above than behind the ear. I always remove the outer wall of the attic, and the posterior wall of the external meatus, with the chisel. McEwen, Barr, and others recommend the use of the burr and dental engine. I have not been able to find burrs which bite properly on the hard bone, and the operation then becomes very tedious. We frequently find a number of mastoid cells on a level with the attic. In all operations these should most carefully be looked for, and if necessary well scraped and plugged. If they are not treated you are sure to get recurrence of the disease. This is a matter of great practical importance, and frequently neglected.

The after-treatment is often very tedious. I have generally kept the outside wound open for a month or two, and, if necessary, allowed a permanent fistula to form. In a few recent cases I have adopted the method of incising the external meatus and forming a flap or flaps, or of simply excising part of the external meatus. You thus get a very large external meatus, and can easily watch the diseased parts, apply remedies locally, and thus allow the outside wound to heal up at once. You can also, in cases where the mastoid cells have been opened, readily cover the diseased parts with the flap. A very large external meatus is, however, very unsightly. For a few days iodoform should be used, and then aristol.

The facts to which I have endeavoured to draw particular attention are :

1. That localized disease of the attic is very common—more so than is generally supposed: and that it may occur without perforation of the membrana tympani.

2. That in cases of chronic otorrhœa which have resisted the ordinary methods of treatment, and in diseases of the mastoid antrum in adults, the attic is nearly always affected.

3. That pains radiating upwards and forwards are characteristic of diseases of the attic.

4. That in all cases of disease of the attic we should adopt ordinary simple surgical treatment before having recourse to the removal of the ossicles under chloroform, or to the opening up of the attic.

5. That in opening up the attic we should make a large incision round the top of the ear, and treat the wound from above.

6. That, in suitable cases, the external meatus should be incised and flaps formed, or part of the meatus excised and the outer incision allowed to heal at once.

7. That upon opening the attic we should always remove the outer wall and the posterior wall of the meatus, and always look for cells which may be on a level with the attic.

Dr. DUNDAS GRANT was unavoidably absent from this part of the meeting, but a *résumé* of the following remarks was read on his behalf by the Secretary:—

To those upon whose attention the appearances characteristic of attic disease now force themselves so frequently, it must seem very strange that reference to it in classical works on otology up to a recent time should be so extremely meagre, and the question arises as to whether the attic is more frequently affected now than in the days gone by. This is extremely unlikely, and there can be little doubt that the reason for it being so frequently recognized at present is the greater care with which it is sought for. In support of this contention we have the very interesting experience recorded by Schmiegelow as to the relative frequency of attic disease in hospital and in private practice, the former being 2·6 and the latter 13·5 per cent.¹ The explanation that he offers is simply that in the more limited sphere of private practice there was greater facility for minute examination, and that if equal care and attention could be exercised in the investigation of hospital cases, the percentage of this disease among them would be very much greater than we have hitherto made it out to be.

We have most of us gone through a somewhat similar experience, and for myself I can only say that I was at first struck by the frequency with which evidences of this form of disease appeared in the comparatively small circle of my private patients. In my experience attention is drawn to it by one of the following circumstances: persistency of otorrhœa in spite of judicious antiseptic treatment; persistence of deafness after the subsidence of an otorrhœal discharge; an atypical course on the part of what appeared at first sight to be an ordinary acute suppurative inflammation of the middle ear; vertigo; headache; desquamative formations in the external meatus without perforation of the membrana tensa. The

¹ JOURNAL OF LARYNGOLOGY, January, 1897, p. 196.

occurrence of the well-known dangerous sequelæ of suppurative inflammation of the middle ear—I refer to sub-dural abscess, meningitis, cerebral and cerebellar abscess, sinus phlebitis, and pyæmia—may often be traced to disease affecting the part under consideration.

In the acute forms of suppuration of the attic the difficulty in the diagnosis, from acute circumscribed external otitis, from some of the severer forms of meningitis, and from acute purulent inflammation of the atrium of the middle ear, is in many cases most difficult and often impossible. Frequently it is only when the disease has partially or completely subsided that one is able to recognize definitely the site of its origin.

The conditions found on examination are then perforation of Shrapnell's membrane above or behind the short process, leading generally to bare or rough bone—malleus, incus, or outer osseous wall of the attic—but sometimes merely to a cavity filled with the *débris* of desquamated epithelium, such perforations being often concealed by ceruminous or epithelial crusts, which have to be carefully removed; further, polypoid or granulation growths, which are found, either before or after removal, to protrude from a fistula in the position described.

In most cases the membrana tensa is in large part destroyed, but in some it is entire. Again, Shrapnell's membrane may be whole; but there is a large perforation of the membrana tensa extending to its upper part, through which there protrudes downwards a drop of pus, or granulations, or shreds of desquamated epidermis. Sometimes, on the introduction of a suitable probe, spots of bare, rough bone may be detected. Siegel's exhausting speculum is an important diagnostic instrument; and by its means pus and epidermic *débris* can often be brought into view and even removed. Another instrument of some value is a suitably curved forceps, by which the removal of epidermic shreds is often facilitated. Milligan's intratympanic syringe is the most practical instrument for the irrigation of the cavities; and, if only gentle pressure be exercised, it may be used with relatively perfect safety for the extrusion of secretions in the attic space. For therapeutic purposes I have added to it an additional tube, by which small quantities of powder, such as boracic acid or iodoform, may be insufflated into the cavity.

In regard to the treatment, the following is the order of proceeding. For the *stoppage of the discharge*: irrigation by means of Milligan's syringe, followed by insufflation of antiseptic powders through the perforation; and, in the case of cholesteatomatous formation, the introduction of alcohol drops, diluted with one, two, or three parts of water or of glycerine, according to the sensitiveness of the part. The local application of oxygen, when practicable, deserves further trial, if one may judge by the result of the case recently exhibited before the Association by our President.

Should these means fail we next remove the malleus, and the incus also, if the latter bone is present and very easily accessible. Too great zeal in searching for the incus should be avoided. If, after further patient trial of irrigation and insufflation, the discharge, pain, or other symptoms still persist, the free opening of the attic cavity by operation is indicated, especi-

ally if headache is persistent. This is, in my experience, only to be satisfactorily effected by means of Stacke's operation, more or less modified according to circumstances, and practised by means of the gouge and mallet, using as a guide and protector the one devised by Stacke, which is now so well known, or a strong bent probe of similar make which I had constructed for myself before I was acquainted with Stacke's. A gouge-forceps has been devised by Gellé, and I have tried to make use of it, being strongly impressed with the ingenious way in which it is adapted for the purposes intended; but I have been disappointed, finding it slip, and making no impression on the bone with which I had to deal. It is not impossible, however, that, in cases where there is simple limited caries of the outer wall of the attic, this instrument may be found of very great value.

I have also endeavoured to make use of the ordinary burr and dental engine, but in this also I have been disappointed, though with improved instruments I hope to realize this ideal method of operating. I have long thought of the desirability of finding a guarded burr, and I designed the one which I have shown to the Fellows of the Association: at the same time I have not been able to make any impression on dense bone, and up to the present have been obliged to content myself with the cautious use of the chisel and guard. If the operator had three hands, and could for and by himself manipulate the Stacke's guard, the chisel, and the mallet all at the same time, while a fourth hand, or that of a skilled assistant, practised the repeated swabbing which is essential, nothing better could be desired; and in the absence of this there is no doubt that with the guard in one hand and the burr in the other the operation ought to be carried out most satisfactorily, especially for the parts round the aditus and antrum.

The following rules with regard to treatment will be found very applicable. In the absence of headache, fever, or mental disturbance, and in the case of careful persons—private patients in general—the conservative method should be perseveringly employed. In other persons the surgical opening up of the part should not be long delayed if the conservative method of treatment produces no marked progressive result.

In the presence of headache and other symptoms, especially in unfavourably situated persons—hospital patients in general—Stacke's operation is earlier required.

Dr. WAGGETT: In the absence of any other speaker, I would ask Dr. Bronner if he can tell us anything with regard to acute affections of the attic. I have only seen one case—that of a policeman, aged fifty, who, having recovered from a severe attack of influenza, came to the hospital about ten days afterwards complaining of very severe pain in the left ear and increasing deafness. On examination there was found a pyramidal swelling at the posterior part of the membrana flaccida, and considerable redness of the upper part of the membrana tensa and the adjacent part of the meatus. On Valsalvan inflation a drop of tenacious mucus came from the summit of the pyramid. I probed this with a fine probe. The instrument was found to enter a considerable distance and to reach what was obviously the internal wall of the attic. On inflation with a catheter the main part of the tympanum was found to contain no

fluid, while a further small amount of tenacious mucus came from the perforation. The case got perfectly well in about a fortnight : treatment consisting in enlargement of the opening with a galvano-cautery, with subsequent syringing with the intratympanic catheter, instillation of antiseptics, and hygienic measures. With regard to syringing, might I suggest that it is very important that the stream of water should be directed either backwards or forwards, and not upwards? In this way pain is avoided. As to the syringe shown by Dr. Bronner, and intended to be manipulated with one hand, I should like to say that I think it would be very difficult to keep it sufficiently steady for accurate work. I have recently used in an attic case an ordinary Hartmann's tube, with an improvised handle, connected by six inches of flexible tubing with a small ball syringe. Two hands are required, but the instrument can be manipulated with great precision.

Dr. SCATLIFF : I should be glad if Dr. Bronner would kindly tell us what he considers the exact boundaries of the attic, and whether he would include the mastoid antrum as part of the region he has been speaking of under that name.

Dr. HILL : It is very difficult, sir, to add very much to what Dr. Bronner has already said on attic disease. His paper has been short, concise, and, I am quite sure we all agree, comprehensive. A point which I have found useful in my own practice in the diagnosis of attic trouble has been the increase of deafness and incidence of pain on the stoppage of a discharge. There was very great prejudice amongst practitioners of a generation or two ago against stopping a discharge. They told their patients that they were all the better when the ear was running, and really in some cases (such as attic cases) the patients were prepared to back up the opinion of their medical man. Patients invariably found that they were worse, that they had pain, or at least headache and increased deafness, when the discharge was stopped up. This was not usually from blockage in the meatus ; it was, of course, due to blockage of the perforation in the membrana tensa, or to blockage of the perforation in the membrana flaccida, or else to a solid or viscid accumulation in the attic itself. Now, Dr. Bronner has incidentally, in an indirect way, mentioned this point, but he did not bring it out in the prominent way which perhaps he had intended to. It is one of the most valuable symptoms we have that the patient has pain on the stoppage of discharge, and increased deafness ; and it is in these cases that we may with certainty, I believe, diagnose attic disease, and we must then at once proceed to clear out the attic by one of the methods which has been suggested by Dr. Bronner. I always, myself, commence with the milder methods of operation, and try to syringe out the attic with some form of intratympanic syringe. If that does not do I then use curettes, and failing success (and we very often do fail), I have no hesitation in removing the malleus before going on to the major operations. Delstanche's instrument is the most simple thing imaginable, and is better, in my opinion, than any other for removing the malleus, and I am glad to hear Dr. Bronner speak so highly of it. Attic cases undoubtedly lead to very grave trouble if neglected. On more than one occasion I have had to blame

myself for dilly-dallying about at the request of friends, for the patients have in some instances afterwards passed from my care to the general surgeon, and have even appeared on the *post-mortem* table. Dr. Bronner has spoken in somewhat derogatory terms of Stacke's protector. Now, I have just taken up Stacke's protector, and perhaps I am a little over-enthusiastic. I first saw it used by Dr. Dundas Grant last year. I had often myself used a bent probe as a protector to the aqueduct of Fallopius, and when I found that so experienced an operator as Stacke had devised a protector which appeared better than an ordinary probe, I rather plumed myself that I had been on the right track, and I purchased a protector which I have since used regularly. I must say that in the last case, in which I myself held the protector, facial paralysis ensued. I did not perform the operation, but was assisting another surgeon. It does not, of course, follow in this case that the aqueduct of Fallopius was injured, and that Stacke's protector did not protect that region which it was meant to protect. The facial paralysis may have resulted from concussion, because a mallet was employed.

I would ask Dr. Bronner whether he has utterly discarded drainage tubes at the back of the auricle, or whether he altogether relies on drainage through the meatus, and what he thinks of drainage tubes generally in mastoid operations? And, also, whether he has ever observed any trouble in contraction of the outer part of the meatus from the auricle, which has been displaced forward in Stacke's operation, not having been fixed sufficiently far back afterwards? I have a case at present at St. Mary's which is not in a very creditable condition. I believe it is entirely due to the fact that sufficient stress was not laid on the auricle being stitched well back after a rather extensive wound. The discharge, which was fairly copious, is naturally kept in. This is the first time it has occurred in my experience, and another time I shall take care to see that after the displacement of the auricle it is pulled well back and stitched firmly in position, and if the stitches give way that some means shall be applied by which the auricle will be kept properly back. In conclusion, I would congratulate Dr. Bronner on the soundness of his views. I believe he has put the subject in a way which will attract very little adverse criticism, and that is saying a good deal in these days.

The PRESIDENT: Considering the remarks made by Dr. Bronner, and the observations by members with regard to this subject, my thoughts naturally turn towards oxygen treatment. With regard to the treatment of diseases of the attic, the only point I wish to emphasize is this, that I think the use of insufflations is distinctly bad. We are dealing with a region which is subdivided into a great number of small cavities, which are difficult of access. My view is that if powders are insufflated into these small cavities, they may be got in, but the trouble is to get them out again, in spite of an enlarged opening in the membrana tympani.

By adopting this course a state of things is produced analogous to that described by Dr. Hill, of hearing becoming worse when the discharge stops. I had the honour of bringing a case before the Association at the last meeting in which the left mastoid had been trephined, and which in spite of treatment had continued to discharge for seven years. I

found that after nine weeks' treatment with oxygen gas the discharge from the attic completely ceased, and the case was practically cured. I think the reason is obvious: vapour enters more freely into the small places, and produces good results: and I once more respectfully suggest that gentlemen should give oxygen a trial.

I am sure we are all very interested to hear Dr. Bronner, and are indebted to him for his valuable paper. Diseases of the attic are more or less of modern importation. When many of us were students diseases of the attic were not recognized.

Dr. BRONNER'S reply: I should like to thank Dr. Hill for his interesting remarks about pain. I only just a few weeks ago attended a young lady who had pain in the head. The discharge had suddenly stopped, and I was called in in consequence of this pain, but no operation would be permitted. I simply got a bent probe, put some cotton wool on it, and forcibly opened up the attic. There was at once a discharge of pus, and I think pain has ceased ever since. Stacke's protector is, I think, very clumsy. I think one can do all that is required with a thin bent probe. It is simply necessary to know where the cavity is and to find out the boundaries. As regards drainage tubes, I think these are very painful. I plug with gauze, and I think when this is used the granulation tissue is stopped much better, and the formation of epithelial covering is very much quicker, which is, of course, very important. As regards the displacement of the auricle, of course the after-treatment of these cases requires a great deal of care. It depends greatly upon how the ear has been bandaged. I think acute diseases of the attic are very rare, but the subacute are very common; and I wish to draw attention to this because in the text-books the subacute are not at all acknowledged. It is most important that in syringing the stream should be directed backwards and forwards. If directed upwards it causes not only pain, but bad attacks of giddiness.

As to the boundaries of the attic, of course the attic is practically the top of the middle ear, and it is bounded at the top by a thin layer of bone—tegmen tympani—and outwards by what is called the outer osseous wall of the attic, and by Shrapnell's membrane, and I think at the posterior part we find the wall of the anterior semicircular canal. The most important thing is the contents of the attic. Of course, we have the ossicles and the ligaments of the ossicles, and we have irregular bands of mucous membrane which are congenital. In some cases, where the folds of the mucous membrane are small, the pus will, of course, get from one cavity into another. I do not think there is so much danger in using powders; the great thing is to have a large opening so that the powders may be syringed out. I do not think oxygen would remove the *débris* which we find in these cases.

Dr. MACNAUGHTON JONES. *Drawings taken with the Magnifying Aural Speculum of a Hayseed which had Sprouted from the Wall of the Meatus close to the Membrane.*

The patient had been suffering from noises in the ear for some years, and had other evidence of middle ear deafness. He sought advice for

the deafness, being quite unconscious of the presence of any foreign body. On examining the meatus, what appeared to be a pink sprouting mass of fungus was seen with the transmitted light, as shown in the drawing. The appearance was most puzzling, and it was not until the sprouting hayseed was withdrawn that its nature was discovered. It was quite firmly attached to the wall of the meatus, being removed clean with the lever forceps. The patient then remembered having, over two years previously, at harvest time, suddenly felt as if something had entered his ear, and the tinnitus began.

DR. MACNAUGHTON JONES. *Drawings of the Auricles of a Patient, aged thirty-eight, who had been for many years subject to Rheumatic Gout.*

The photograph of the man demonstrated his crippled condition before he had been subjected to the treatment of the Tallerman hot-air bath. Under this he had vastly improved, and it was while he was undergoing the treatment that he had come under his (Dr. Jones's) observation.

It was the most marked case of multiple tophi he had ever seen. No accurate account of the exact histological and chemical character of these gouty tumours had been published, so he had sent some, removed from this patient, to the Clinical Research Laboratory for report and analysis. The section under the microscope showed the nature of the tissue. The report as to the nature of the chemical constitution was not yet completed. There were some alkaline earths present, but no urates. There were some sixteen tumours in the two auricles.

DR. EDWARD LAW: In reference to Dr. Jones's ingenious portable lamp case, I should like to ask him whether it is not more expensive than necessary. I notice that he includes three magnifying specula. Is it necessary to have three? And does Dr. Jones find any very great advantage in the magnifying speculum over the ordinary one? My own experience with the magnifying speculum has been very limited. I have always found the ordinary speculum, which is much less expensive, quite sufficient for both examination and treatment. Is the mantle safe from injury? Can we carry it about without the danger of finding that on reaching the patient's house the mantle has gone wrong?

In reference to applying electricity to the Eustachian tube, I think Dr. Jones has made a very great advance on his previous instrument. I have seen a similar instrument used in urethral disease. Has Dr. Jones gained any beneficial results from the use of electricity in the Eustachian tube? Some years ago I had opportunities for carrying out a number of experiments, and my experience was so unsatisfactory that during the last year or two I have scarcely employed this method of treatment.

THE PRESIDENT: I would like to supplement Dr. Law's question by asking Dr. Jones whether he finds this apparatus has any advantage over an electric lamp which contains a small accumulator, and which is easily recharged.

DR. MACNAUGHTON JONES: With regard to Dr. Law's question as to the magnifying speculum, I would first remark that the speculum shown

is not my pattern, and I do not approve of it. It is clumsy, and, like a good many instruments that are either copied from diagrams or made from description, the original instrument has been entirely altered. My speculum, as made by Arnold, is very light and works with a much simpler arrangement. I have been using this magnifying speculum for over three years. Having had all my drawings of affections of the tympanum in my atlas done without its aid, it is obvious that I consider that first-class work can be done without such a glass. With the magnifying speculum I can detect the least movement in the tympanum—the slightest alteration in the cone ; and I can examine, in a manner impossible without it, the tympanic cavity—when it is exposed—quite easily. I am sure that anyone who tries it, and becomes thoroughly familiar with it, will always employ it.

As regards electricity, I quite agree that, in a great many cases, no good result is obtained, and I believe it is utterly impossible to tell when benefit is likely to follow ; but I am also convinced that, in those cases where there is a want of power in the tubal muscles, and in old progressive cases where there has been collapse, Faradization is a most important help in treatment. I have very frequently had good results. I do not measure, as some gentlemen think it necessary, the electrical power in milliamperes ; but I generally find a few knobs of the Mackenzie battery sufficient, and I test, on my own lips or the patient's, the force. I constantly use electricity, and can certainly say that, in a number of cases of middle-ear disease, it has yielded me excellent results.

With regard to the lamp, I do not know whether it is common experience, but I certainly have found that electricity is not always to be relied upon ; and I think it is a very useful thing to be able to fall back upon gas. In fact, it was that idea which suggested to me that a portable incandescent lamp would be an advantage. I cannot yet say what the expense may be. Of course, it can be had without the appliances. One shilling and threepence or one shilling and sixpence is not much to pay for the comfort of a good light, even if we do injure the mantels.

DR. EDWARD LAW. *A Case of Hyperostosis of the Right External Auditory Meatus.*

C. F., aged thirty-six, consulted me six weeks ago on account of great deafness and discomfort in the right ear. The patient stated that he got his eyes and ears full of sand whilst rabbiting, and had since suffered from deafness in the right ear. Serious impairment of hearing had existed in the left ear since an attack of scarlet fever at eight years of age.

Examination showed almost complete occlusion of the right external auditory meatus ; the condition is accurately depicted by Dr. Waggett in the drawing which I pass round.

There was slight redness, and the small fissure-like opening was blocked with cerumen and epithelial *débris*. This foreign material was removed, and the patient advised to avoid all sources of irritation, and to be examined from time to time by his local doctor.

The reason that I mentioned some time ago the desirability of putting

this case down for to-day was that at the time I considered the possibility of operative interference. To-day I do not think the question of an operation comes in, when we remember that the patient does not complain of deafness or discomfort in his right ear and is very deaf in his left ear, the result of chronic suppuration in the middle ear during childhood. At the same time, I shall be very pleased if any of the members will give me their opinion in this case.

The PRESIDENT: I agree with Dr. Law that it is better to leave operation out of the question. In any case where one ear only is deaf, and there is any affection of the other ear, whether it is exostosis or anything else, one requires to be much more guarded in treatment than under other circumstances.

Mr. WAGGETT: I had an opportunity of seeing this case about five weeks ago, and at that time there was decidedly much less room than there is now. The larger mass of hyperostosis was at that time closely pressed against the opposite wall, while at present there is a distinct cleft between them. In view of the deafness on the other side and the freedom from troublesome symptoms in the affected ear, I think surgical interference is contra-indicated, particularly as improvement has already taken place without treatment.

Dr. BRONNER: I also support the theory that no operation should be resorted to—except, of course, if suppuration set in. I had a very similar case under my care, a girl, and gave her spirits of wine and boracic acid. She improved, and when I saw her some months after she told me her ears were all right again. I would suggest that Dr. Law give this treatment a trial in this case.

Dr. SCATLIFF: I agree with Dr. Wingrave, that considering the growth is so hard there is very little chance of its disappearing under any local medical treatment, and, therefore, should recommend its removal by a drill or other instrument, if a cure be desired.

Dr. LAW, in reply, said: My own experience in these cases is that, without some strong indications, operative measures should not be resorted to. I have seen, during the last ten years, three or four cases in which marked depreciation in hearing has resulted after the operation. This patient at the present time has no subjective symptoms: he is an intelligent man, in a good social position, and can be relied upon to take every care of himself. Some little time ago I saw a similar case in consultation, and we were inclined to advise an operation. In this instance the patient came from abroad, and from a region in which he was not likely to obtain skilled assistance. Under such circumstances, I should strongly advise an operation. I have seen acute inflammation and other troubles follow the operation. I have had several of these cases during the last few years, and Dr. Waggett has kindly sketched and painted six or seven of them. Several of these I thought at the time would require an operation, but no operation has been performed, and I am very pleased to state that in every case the condition of the patients has improved. I think improvement is due in many cases to the patients being careful to avoid all sources of irritation, and attention to gouty symptoms. Such patients frequently pour cold water into their ears, and are careless over

their morning bath. In reference to the use of boracic acid and spirit, I have tried it, but not when I have had such a small opening. I remember one case very well in which I applied spirit and boracic acid, and gave the patient full instructions, and he came back after a few days complaining of considerable pain in his ear. The small opening had got blocked up with boracic acid, and there was an acute dermatitis.

Dr. HILL. Tuberculosis of the Nose.

The case was brought to me by a general practitioner, who, I think, made a very shrewd diagnosis when he said that it was a case of tuberculosis of the nose. Tuberculosis of the nose is a very rare disease, and it is very difficult to diagnose without a microscopical examination. Undoubtedly the patient was tubercular, but the case to me presented many of the characteristics of malignant disease. There was pain in the nose, a tumour (with an ulcerating granular surface) of the inferior turbinal, and at times bleeding. Bleeding and a tumour in the nose naturally point—or at least lead to—a grave suspicion of malignant disease. In spite of the patient having some tubercular disease of the lung, I removed the inferior turbinal with Mr. Carmalt Jones's instrument, and submitted it to Dr. Pegler for microscopical examination; and I was very glad I did this, because, contrary to my previous conclusion, it turned out that the case was not malignant. Looking at the specimen, many might think that it was a case of intranasal lupus: but I believe the amount of inflammation present shows that the disease is rather active, and clinically the symptoms altogether exclude the idea that the disease is of a chronic nature, such as lupus. The patient is going on very well, but there is a great tendency to exuberant granulations. I would have shown the patient to-day, but I have been cauterizing so much that I fear on account of the sloughs it would not have been very instructive to look at the interior of the nose at the present time. The patient is twenty-eight years of age; married; no syphilis.

Dr. PEGLER. Remarks upon the Microscopical Sections shown by him. Polyoid Vegetations from a Case of Frontal Sinus Disease.

These are very similar to the granulation polypi removed from the antrum, and are constituted by a very delicate granulation tissue basis distributed in which are a large number of young and growing cells; a capillary network ramifies in the tissue, and the growths are fringed with ciliated epithelium.

Canine Epithelioma of the Pharynx.

With the exception of a slight difference in the shape of the cells the features presented in this section are similar to those found in the human subject, as will be seen by comparing the specimen with one of human epithelioma of the pharynx which is purposely placed under one of the microscopes.

Sarcoma of the Vestibule.

This is a section of a small tumour of about the size of a pea which was removed from a girl of fifteen. I show it for comparison with Mr.

Wilkins's case. The patient did not return afterwards, and there were no distinct characters of malignancy. Still, there is every reason to believe from the appearance of the tissue that the growth is a spindle-celled sarcoma.

Tuberculous Disease of the Inferior Turbinate.

This is a section from Dr. Wm. Hill's case, and I show it on account of the rarity of the specimen. Although the tissue is densely infiltrated with small round cells, there is more here than mere inflammation of the turbinate. To appreciate the changes correctly the section should be carefully compared with one of the normal body. It will be noticed that vascular sinuses and a few acinous glands are recognizable, but the latter only with difficulty. There appear to be several giant cell systems in the field, but they are not typical and the giant cells are small. The zone of leucocytes is, however, very discernible, and some of the systems are caseating in the centre. Here and there portions of the epithelial border remain, infiltrated with small cells like the rest of the tissue. There are no bacilli of tubercle to be found.

Dr. HILL: Tuberculosis has been diagnosed on the microscopical appearances of the growth removed. The diagnosis was made by Dr. Pegler in the first instance from a view of the specimen. The latter has been seen by Mr. Bowlby, Mr. Charters Symonds, Dr. Kanthack, and other authorities, and they have all come to the conclusion that the bulk of the growth is inflammatory, but that giant cells are present, together with breaking down nodules evidently tubercular in nature. These appearances do not support the idea that it is sarcoma or any other form of malignant disease, but I think they very definitely—even though the bacillus has not been demonstrated—support the view that the disease must be tuberculous, though only of a moderately acute nature.

PROCEEDINGS OF THE LARYNGOLOGICAL SOCIETY
OF LONDON.

Ordinary Meeting, April 15th, 1890.

FELIX SEMON, M.D., F.R.C.P., *President, in the Chair.*

ADJOURNED DISCUSSION ON FOREIGN BODIES IN THE UPPER AIR
AND FOOD PASSAGES.

Dr. SCANES SPICER remarked that in children, for removing foreign bodies impacted in these passages, a general anæsthetic should be given at once, unless asphyxiation is imminent, in which case tracheotomy should be done, and then anæsthetization. The distress and terror of the little patient is thus allayed, calm and gentle procedure on the part of the surgeon is facilitated, the risk of increasing impaction is lessened, and chances of removal improved. Foreign bodies in the nose in children from the smallness of the channels and from the swelling—usually

secondary to previous attempts at removal or to consecutive rhinitis—are not usually to be detected even by skilled rhinoscopy, and the diagnosis must depend on the probe. This must be used with caution in the right direction, and the finger inserted in the naso-pharynx to guard against backward dislodgement of the intruder into the larynx or œsophagus. *Forcible* injection of water with Higginson's or any other syringe is undoubtedly attended with risk to the ears, especially if practised through the pervious nostril with the other one blocked. *Gentle* injection of a stream of water, insufflation of air up the open nostrii (Dodd's method), and sternutatories, he had seen tried without avail. When a suitable case presented itself, however, he intended trying these methods again while holding open the anterior naris of the blocked side with a speculum, tilting up the tip of the nose so as to enlarge and straighten the passage, and flexing head well on to sternum. A case was referred to in which a short vulcanite cylinder got impacted in the anterior recess of the nose; one in which a lead drainage spigot was accidentally pushed by a patient into his maxillary antrum, which had been opened for empyema through the canine fossa some months before; and one in which a young woman who was having her larynx brushed out for hysterical aphonia bit on the metal mop-holder with such force that it was divided, and disappeared through her fauces: careful examination gave no trace of its position then or afterwards, and for some months she has not suffered any abnormal symptoms or from aphonia. It is not improbable in the case of certain metallic foreign bodies, *e.g.*, needles and pins, which had perforated the wall of the œsophagus and were lying more or less parallel to its axis (such bodies as it is most important to remove forthwith), that assistance would be given by a strongly magnetized bougie of flexible steel shaped like an ordinary gum œsophageal bougie, but fluted longitudinally. He had not had a case suggesting the need of such an attempt since this idea had presented itself. With reference to the use of emetics for dislodging impacted bodies, he would fear to initiate the action of a powerful *vis-à-tergo* which could not be regulated or controlled. Emesis appeared just as likely to increase impaction and damage surrounding structures as the *vis-à-fronte* of the surgeon acting with undue violence at the end of an œsophageal ramrod—a method now so generally deprecated. He would be glad to hear what were considered the best methods of treating (1) the gullet: 2) the external wound after œsophagotomy for impacted foreign bodies.

Mr. LAWRENCE related the case of a lady who had a whitening bone in the epiglottis, low down, close to the left pyriform sinus. The bone caused no symptoms, except an occasional prick. She localized the position as in the posterior faucial fold. Mr. Lawrence drew attention to the difficulty of localizing throat impressions generally. Another case, that of a very large rhinolith, was mentioned. The stone had no nucleus, and the removal piecemeal caused unusual hæmorrhage, not to be accounted for by the operation.

Dr. A. A. KANTHACK gave the following account of a specimen of impacted piece of meat in the larynx, which he showed. A piece of meat, during hasty swallowing, had become lodged in the aditus laryngis,

and has there been firmly impacted. A sagittal section had been made, which shows the relation of the parts to the foreign body. The epiglottis has been pushed forwards against the tongue, and the piece of meat has been firmly moulded into the upper part of the larynx. The specimen affords a good example of what happens when the epiglottis does not act and becomes pushed forward, and refutes the view expressed by Prof. Anderson Stuart that the epiglottis during deglutition becomes applied against the basis lingue, and acts as an inclined plane for the bolus to slide along into the œsophagus beyond the larynx. Experimentally this view had already been disproved by the speaker in conjunction with Mr. H. K. Anderson, of Cambridge ("Journal of Physiology," 1893).

Dr. LAMBERT LACK entirely disagreed with Mr. Symonds with regard to the absence of odour with a unilateral purulent discharge from the nose in children as diagnostic of the presence of a foreign body. In a large number of cases he had had, the fœtor of the discharge was expressly noted. In one case an intensely horrible smell pervading a whole ward was traced to a foreign body (a piece of string) in the nostril. Dr. Lack had always considered that a unilateral *fœtid* and purulent, and often irritating, discharge from the nose of a child indicated a foreign body, had usually administered an anæsthetic, and only once failed to find the foreign body. With regard to fish-bones in the pharynx, he thought that they were sometimes present when we did not find them, and that the persistence of symptoms so well known is really due to their presence. These symptoms usually last one or more months, and possibly their disappearance at the end of this time is due to absorption of the bone. If it is a needle or similar unabsorbable body which is complained of, it will probably be found or heard of later. Thus, in one case which had come under his notice a needle was complained of. A month later it was found in the tricuspid valve. The places in which these foreign bodies most often lodge and escape observation are the tonsils, faucial and lingual; these should always be examined by palpation as well as illumination. A most useful and delicate method of palpation was first suggested by Dr. Sutherland. Having localized the position of the foreign body as far as possible by the patient's sensation, the part is well illumined and palpated carefully all over with a probe. The patient complains of pain and pricking, the more acutely the nearer we approach the affected spot, the greatest pain being caused when we touch the foreign body itself, and in this way we may localize accurately and remove a foreign body which we can hardly see at all. The following cases of interest were quoted.

Case 1.—The patient, a middle-aged woman, gave the history that one night, three weeks before, she woke suddenly with a violent choking attack. She coughed violently, could neither speak nor swallow, but says her breathing was not obstructed: she vomited copiously, and the attack subsided. In the morning her throat was very painful, and a doctor who was called in treated her for tonsillitis. The patient now missed her tooth-plate for the first time. This plate she had worn constantly day and night for many years, but had latterly noticed it was becoming loose. As, however, symptoms had subsided, it was presumed that the

plate had been thrown away with the vomit. At the end of a week the soreness of the throat had nearly vanished, and she went to the seaside to complete her cure. Three weeks later she complained of a pricking in the throat, which she could not localize definitely. This was increased by swallowing or turning the head suddenly. She could swallow without difficulty, and could speak easily, although with a perceptible hoarseness. She had a slight irritable cough, a little mucous expectoration, a fear that the plate was still in her throat, but no other symptoms. On examination the tooth was seen resting on the right arytenoid, and the plate extended obliquely across the larynx to the anterior parts of the left ventricle, the left ventricular band, and the aryteno-epiglottic fold. The plate was removed with an ordinary Mackenzie forceps. The parts with which the plate had been in contact were superficially ulcerated, and soon healed. The chief point of interest in this case is the slight subjective symptoms caused by such a formidable-looking object; an indefinite pricking sensation, a scarcely perceptible hoarseness, a slight cough, with scanty expectoration, were all that were complained of. Case 2.—A male, aged seventeen years, was intubated at a general hospital, in the summer of 1891, for laryngeal obstruction, probably of traumatic origin. During a violent fit of coughing the string broke, and the tube was sucked down into the trachea. Inversion and exploration by a probe and finger through a laryngotomy wound failed to detect the tube. Eventually it was assumed that the patient had swallowed it, and he was discharged from the hospital. During August, 1891, he gained flesh, and was fairly well, although suffering from much cough and purulent expectoration. In September, during a severe fit of coughing, something was felt to slip in his chest, and signs of occlusion of the left bronchus came on. This was followed by increased cough and purulent expectoration (a pint or so a day), rapid wasting, and soon by evidence of a bronchiectatic cavity at the left base. Dr. Lack then resected three inches of the sixth rib, and nine days later opened a large abscess-cavity deep in the lung. The tube could not be found. The boy was much relieved by this operation, but died a month later from hæmorrhage. *Post mortem* a No. 3 O'Dwyer's tube was found in the left bronchus, separated only by a thin membrane from the pulmonary artery. The left lung was very small and collapsed, and contained a large abscess-cavity, which had been opened. One point of interest here is that the tube had remained three months in the trachea, and yet exploration by a laryngotomy wound by probe and finger, by inversion, etc., had failed to remove or even detect it. It is doubtful if the tube could have been safely removed, considering its anatomical relations, even if it had been reached. Dr. Lack entirely agreed with Mr. Symonds' remarks about the real danger of foreign bodies entering the windpipe during chloroformization. A case of post-nasal adenoids under his care owes her life entirely to the fact that tracheotomy instruments were at hand during the operation. He would also point out that in some cases of foreign bodies in the larynx breathing may not be restored, even after tracheotomy, until the foreign body is removed, apparently because of the spasm its presence excites.

Mr. CRESSWELL BABER showed three rhinoliths to illustrate the

subject under discussion. The first came from the left nasal cavity of a medical man. He applied with a history of discharge from that nostril for two or three months, having had no inconvenience at all before that. On inquiry, he remembered, when three or four years old, putting a boot-button into his nose. Examination showed the rhinolith to contain so much iron (over thirty per cent.) that it was evidently the boot-button, which must have been there for twenty-five years. The case was interesting as showing that a foreign body may lodge in the nose for over twenty years without attracting even an intelligent patient's attention.

Case 2: a child, aged twelve. History of discharge from left nostril, with bleeding, six years. No history of introduction of foreign body. After removal of the foreign body under anaesthesia, it was found to consist of a concretion having for its nucleus a plug of tightly-folded rag. The rhinolith in this case had produced a considerable distortion of the bones: the left side of the nose and left cheek were bulged out, the septum deflected to the right, and there was a deep depression in the centre of the inferior turbinated body.

Case 3: a man, aged thirty-three, with an intermittent purulent discharge, mixed with blood, from the left nostril, for about nine months. A rhinolith, having a glass bead for nucleus, was found deep in the inferior meatus. It weighed sixteen grains. There was no history of its introduction.

(These cases are published in full in the speaker's article on "Foreign Bodies in the Nose, and Epistaxis," in Burnet's "System of Diseases of the Ear, Nose, and Throat.")

In addition to forceps, Mr. Baber found a steel hook, of which the hook itself measured a quarter of an inch in length and one-eighth of an inch in breadth, very useful for removing foreign bodies in the nose and rhinoliths. It must be strong, as in the case of rhinoliths it is often necessary to use *considerable* force. Mr. Baber remarked on the necessity of examining the naso-pharynx in cases in which a foreign body is felt by the patient in the larynx, as sensations in the naso-pharynx are often referred to that region.

Dr. CLIFFORD BEALE referred to the possibility of sudden obstruction of the larynx during meals by means of scraps of meat, and related a case in which, by instant inversion of the body and a deep inspiration, followed by a forcible expiration, the foreign body was ejected. The necessity for a very deep expansion of the lungs under such circumstances was insisted upon.

Dr. HERBERT TILLEY mentioned a case in which a child, aged four, swallowed an intubation tube, which was removed from the rectum, two days later, by means of a nasal polypus forceps. He also mentioned a case of almost fatal asphyxia during operation for adenoid overgrowths; the portion of growth which had slipped into the glottis, however, was loosened by forcible pushing upwards of the larynx. He pointed out the advantage of having the patient's head well hanging over in this operation, and obviating the accident mentioned.

Dr. W. HILL remarked that one of the commonest forms of foreign body which he had been called upon to deal with had been pledgets of

wool and lint, which had been inserted into the nose after operative measures for the suppression of hæmorrhage. From the fact that several pledgets or pieces of lint are often inserted, one such body is liable to be overlooked, and great discomfort and stench results from its retention for more than two or three days. Such an accident had unfortunately happened in a case under his care in conjunction with a general practitioner; and undoubtedly one or other of them was responsible for leaving a piece of blue gauze in the nose. No discomfort was felt for a week; and the patient was sent to Bournemouth, where he became very ill with fever, violent headache, noseache, and marked fætor. It was removed by Dr. Davison, to the immediate relief of the patient. Dr. Hill had recently removed a stinking pledget of cotton wool from the posterior naris, which had been inserted for epistaxis two weeks previously at a general hospital. In reference to Dr. Spicer's remark that one-sided nasal suppurations in children under six years of age did not necessarily point to foreign bodies, but were frequently associated with deflections and deviations of the septum, Dr. Hill said the fact that septal deformities were so comparatively rare in young children, and unilateral suppurative rhinitis not so very uncommon, would point to this explanation being far-fetched and inadequate. The speaker had once removed a fair-sized turnip from a cow, which had apparently lodged in a pouch of the œsophagus; and he asked Mr. Symonds whether he had seen in his practice foreign bodies lodged in a pouch of the pharynx or gullet.

Dr. GRANT recommended the use of the air-bag by the opposite nostril instead of fluid syringing. Cocaine should first be applied, then an oily spray should be used, and Dr. Spicer's advice to dilate the orifice should be carried out. During the use of the bag both ears should be plugged by means of pushing in the tragus, and the patient directed to blow out the cheeks forcibly. Dr. Grant had found an instrument like a sharp recurved crochet-hook of considerable value. He on one occasion used the panendoscope for the œsophagus, and found no difficulty in introducing the instrument: but the amount of light was small, although sufficient to make it certain that no foreign body was present. He had seen the coin-catcher used with the greatest success for the removal of a tooth-plate from the œsophagus in a case in which he had endeavoured to remove it by means of forceps, and in which he was deterred from using the coin-catcher from fear of the points tearing the mucous membrane during the extraction. He narrated a case of impaction of a fine herring-bone in the lingual tonsil, which was invisible when the laryngoscope mirror was held in the left hand, but easily seen when it was held in the right one. It could only be extruded sufficiently for extraction by means of forceps when forcible pressure was made in the submaxillary region and the patient phonated. He had in his experience come across a case of a second fish-bone after the removal of the first. With the umbrella probang he had only once withdrawn a fish-bone, although he had used it very many times.

Dr. ADOLPH BRONNER had seen numerous cases of foreign bodies in the nose. These had in nearly every case been easily removed by the use of Politzer's bag or by a stream of water applied to the opposite

nostril (not the douche). In cases of foreign bodies in the trachea it was always best to perform tracheotomy, as the body might at any time become loose and get impacted in the glottis, with fatal results. Kirstein's autoscope was often of great use in nervous patients or in children who would not allow the laryngoscopic mirror to be introduced. Dr. Bronner would like to ask Mr. Symonds why cases of œsophagotomy for removal of foreign bodies were so fatal. Dr. Bronner was of opinion that the use of the continuous nasal douche was very dangerous, but that the use of Higginson's syringe was not attended by any bad after-effects.

Mr. W. R. H. STEWART wished to draw attention to the difference between forcible syringing up the healthy side of the nose to remove a foreign body, and the ordinary use of the Higginson douche. Speaking as an otologist he strongly objected to the *forcing* of a stream of water up one nostril if the other was blocked, owing to the damage that might be done to the ears. The ordinary use of the Higginson douche was one of the best ways of employing nasal irrigation, but he doubted its efficacy in removing a foreign body unless force was applied. He disagreed with Mr. Symonds with regard to the absence of factor when foreign bodies were in the nose. He had frequently met with cases in which a very fetid smell was present. He had a very uncomfortable personal experience with regard to the sudden entrance of food into the glottis, some syrupy matter having suddenly entered and blocked the lumen of the glottis, causing the greatest distress for some seconds. With regard to rare foreign bodies, he had that day on removing a pair of tonsils lost one, and after a long hunt had found it squeezed into the posterior nares.

Mr. CHARSLA promised to exhibit a specimen showing one vertebra of a haddock which had passed through the larynx of a child, aged six, and had become impacted immediately below the glottis. The dyspnoea produced was not excessively urgent. There was no history of anything having been swallowed. Although the writer saw some whitish body between the vocal cords when the child was first brought to the hospital, the house surgeon thought nothing need be done.

Dr. SHARMAN asked if stiffness of the neck had been noticed as a symptom of a foreign body in the œsophagus. In Mr. Harvey's absence he saw a child at the Throat Hospital that had swallowed a halfpenny three weeks before admission. The only symptom was stiffness of the neck; the child could not put its head either towards one shoulder or the other, almost as if disease of the cervical spine were present. Nothing could be seen with the laryngoscope. Use of the coin-catcher immediately brought up the halfpenny.

Mr. JESSOP inquired from Mr. Symonds as to any practical method of getting rid of very viscid mucus occurring after repeated examination of the throat for foreign bodies. The umbrella probang was useful in satisfying the feeling of patients after assuring them that there is really no foreign body present. Patients frequently confess to feeling much relieved after this operation.

Mr. WAGGETT said that he had been working with Mr. Sydney Rowland to prove the use which could be made of the Röntgen rays in

the diagnosis and treatment of foreign bodies in and about the larynx. Employing a "focus" Crookes tube transmitting X rays transversely through the neck, they had been able to obtain, with an exposure of five minutes, clear shadow pictures of coins and fish-bones attached to the surface. As the cartilages of the larynx were transparent, and gave no landmarks on the picture, projection charts representing the distorted image of the structures of the neck had been made, reference to which permitted of localization of any given point. Further help in this direction was to be obtained by taking more than one position, and no difficulty was to be expected in obtaining a stereoscopic effect. In order to make exclusion possible, the relative opacity of a variety of bodies likely to obtain accidental entrance had been determined. The cryptoscope, essentially a screen of cardboard coated with potassio-barium cyanide, proved somewhat less sensitive than the photographic plate, but has the advantage of permitting of contemporaneous observation. In a darkened room the front portion of the neck appeared in half shadow, bounded above and behind by the black shadow of the jaw and spinal column. A defined shadow was cast by the hyoid bone, and on introduction of the probe into the larynx or œsophagus the movements of the instrument could be followed without difficulty on the luminous screen. The cryptoscope should afford a valuable aid in the guidance of the forceps in the removal of foreign bodies.

[Owing to the kindness of Mr. Rowland, who had brought his apparatus, photographs were shown, and the cryptoscope demonstrated to the members.]

The PRESIDENT, before calling upon Mr. Charters Symonds to reply, thanked Mr. Waggett and Mr. Rowland for their most interesting demonstration, which in connection with the subject under discussion opened new and most important possibilities for the diagnosis and removal of foreign bodies from the upper air passages. He then briefly summarized the more important points touched upon in the discussion, and instanced as such (1) the question of danger to the ear by forcible injection of water into the nose for the removal of foreign bodies from the nasal cavity; this danger he thought was greater when a continuous than when an interrupted current, such as that produced by Higginson's syringe, was used; (2) the danger of pieces of adenoid vegetations penetrating into the lower air passages when the operation was performed with the patient sitting up: he warmly advocated the position with pending head; (3) the deficient power of localization in the upper air passages: sensations, even when originating in the naso-pharyngeal cavity, frequently being referred to the laryngo-tracheal region; (4) the desirability of any digital exploration being preceded by careful inspection of the parts; (5) the persistence of sensations long after removal of the foreign body. In conclusion, he thanked Mr. Symonds in the name of the Society for having by his careful introduction given rise to so interesting and important a discussion.

Mr. SYMONDS, in reply to Dr. Spicer, said he recognized the unilateral discharge from the nose in young children with adenoids where the other side was obstructed, but he had referred to a purulent discharge

without any such cause. The different opinions expressed by the speakers as to the danger of syringing the nose showed that the method might be employed with little risk of injury to the ear. The fatalities after œsophagotomy were due to septic cellulitis. He suggested that this might be avoided with certainty by operating in two stages, or, again, by plugging the wound with gauze after suturing the gullet.

NEW YORK ACADEMY OF MEDICINE.

March 25th. 1896.

Chairman—Dr. JAMES E. NEWCOMB.

Section on Laryngology and Rhinology.

Instruments.

Dr. L. A. COFFIN, on behalf of Dr. Chappell, presented an attachment to the automatic intralaryngeal syringe which Dr. Chappell had previously presented to the section. It consisted of a flexible tube fitting over the laryngeal canula, so that with the syringe in position for a laryngeal injection the flexible tube could be made to slide on down into the trachea. The injection was made by touching the button.

Dr. JOSEPH MUIR presented an intratracheal syringe. He said it held half an ounce, could be tightened by a slight movement, the quantity injected was regulated by a small ring, and the intralaryngeal tube was flexible, so that it could be bent in any shape.

Aneurism of Ascending Pharyngeal Artery.

Dr. SHARP, in presenting the case, said that the patient, fifty-five years of age, had an aneurism of the ascending pharyngeal artery. He presented her because the condition was a rare one. He had seen two cases with Dr. Griffin—one six months ago that gave the history of specific disease. In this case there was no such history.

Dr. J. WRIGHT said he was greatly impressed with the case, for he had seen two just like it—one in an old woman, and the other in a young woman. In both of these the tumour seemed like a knuckle of the artery. He did not think this was an aneurism. It might be an abnormally large blood-vessel. A case of aneurism of the tonsil had recently been reported in Vienna corresponding to the one shown here last winter by Dr. Waterman.

Dr. T. P. BERENS said he could detect no thrill with his finger, but it seemed like a hard pulse. He raised the velum of the palate, and the projection seemed just like a knuckle of the artery. He would like to ask if the movement were not due to the looseness of the surrounding cellular tissue.

Dr. W. K. SIMPSON said the area of diffusion was greater than it would be from an artery pulsation, which made it appear like an aneurism.

Dr. LINCOLN said he had never seen an aneurism in this region and was not able to satisfy his mind upon the matter.

Dr. MYLES said he had a case under observation somewhat similar to this one. It is in a man about sixty years of age. The vessel was straight and hard, while this one was angular, or, rather, in a bow shape, and soft. He had referred the case back to the general practitioner, who said that the patient had general arterio-atheromatous degeneration.

Intratracheal Injection in Diseases of the Respiratory Tract.

Dr. J. L. BARTON read the paper on this subject.

Dr. J. MUIR said that in treating diseases of the larynx and bronchi we tried to do two things—cure the disease of the mucous membrane and relieve the cough—and these were readily accomplished by local remedies. Menthol solution not only relieved the condition, but made it better, and he used it in from three to thirty per cent. solution. If twenty-five per cent. of alcohol be added and well shaken it makes the solution mix well with the secretions. If there was much secretion two to ten per cent. of tincture of iodine could be used. In atrophic laryngitis two to five per cent. solutions of kerosine ichthyol he has found to afford speedy relief.

Antiseptics in phthisis are employed to prevent secondary infection through the air passages. Inhalations are for that purpose better than antiseptics taken internally and excreted from the lungs; consequently the local injection of antiseptics affords the best of all methods for attaining the desired end.

The SECRETARY read a discussion of the paper by Dr. Barton from Dr. C. C. Rice, who could not be present.

Dr. RICE said the subject was worthy of careful consideration and an impartial trial. Its trial should be a long one, because no rapid effect from the medication was claimed, and because it was, perhaps, particularly applicable to chronic cases of bronchial and pulmonary disease; and if only slight relief in many cases of chronic tuberculosis, etc., could be obtained without the use of narcotics, this method of application would deserve a conspicuous place among various methods of treatment. In skilful hands it could offer no opportunities of harming the patient, and it seemed a *reasonable* method of treatment. The use of oily sprays in the larynx had been demonstrated to be useful, and the application of medicines incorporated in an oily vehicle seemed of equal advantage when applied by Dr. Barton's method directly to the mucous membrane of the larger bronchi.

The treatment should not be advocated without the use of cocaine, or in the hands of unskilful practitioners, for it was not an easy practice to carry the nozzle of a syringe between the vocal bands into the trachea. The weakest solution of cocaine that would put the glottis in a tolerant state should be used. He began with two per cent., and had not had to use stronger than a four per cent. solution. He thought intratracheal injections were to be recommended as a substitute for the various depressing expectorants. It had always seemed to him that the application of oils to mucous surfaces acted locally as sedatives, or astringents, or stimulants, according to the medication used. Astringents could be

applied to the mucous surfaces directly by the use of such volatile medicines as chloroform, thymol, eucalyptol, etc., which by their rapid evaporation quickly cooled the tissues and contracted the blood vessels. The secondary result was stimulation, which was useful in healing ulcerations and absorbing inflammatory swellings. Dr. Rice gave the history of five cases in which he had used intratracheal medication with success, and said he believed it would be found useful not only in allaying irritable cough, but also in abating the harassing cough of tuberculosis.

Dr. DRAYTON said some of Dr. Barton's cases had come under his observation and the results were good. He had tried intratracheal injections on a man with specific history—long hoarseness, subacute bronchitis, and persistent cough, so that he was unable to sleep. The result was excellent; in five minutes there was great relief and comfort, and the patient reported that he slept well the next night. He thought this treatment of local application ought to commend itself to the profession in general, for he considered little or nothing could be expected of cough mixtures, and they should be a thing of the past, for if it were not for the narcotics in them there would be no result. Almost the same could be said of gargles, for by this means the posterior pharyngeal wall was seldom reached to do any good, and as for reaching the desired spot it could not be relied upon. He had for a long time opposed the idea of introducing anything into the trachea, but he had been convinced that it could be done not only without doing any harm, but with actual good. There was no doubt in his mind that oily substances were absorbed by the mucous membrane of the trachea.

Dr. BEVERLY ROBINSON said he had had a good deal of experience several years ago with intrapulmonary injections when using that method of treating tuberculosis, but though he thought for a time that it would accomplish a great deal he had been disappointed, and now did not feel like continuing in that line. He must differ from Dr. Drayton as to the use of cough mixtures, for he got good results, and the more his experience the more he became convinced that we are not so much wiser in our generation; and though we can't always see how putting the stomach through a course of treatment for the benefit of the upper portion of the air tract is desirable, yet the fact remained that we do get good results from the proper use of cough mixtures. He thought the general profession held a doubting mind as to the method of treating tuberculosis by active local interference, though they were shown cases in which it seemed much good had been done; and he thought further that the present enthusiasm in treating the trachea by injection in this disease would not last. He was of opinion that if he had a cough he would not let any man inject into his trachea, nor would he desire it in anyone for whom he had any particular affection.

Dr. J. WRIGHT said he was interested in Dr. Barton's work, yet he must confess that he felt like Dr. Robinson about the matter. It had been his experience that a chronic irritating cough, if not due to emphysema or tuberculosis, was due to something higher up than the trachea—usually some irritation about the larynx, which, when chronic, was caused by some pharyngeal or intranasal trouble; yet there were

cases of subacute tracheal bronchitis in which the irritation was primarily in the bronchi and trachea, and these possibly might be benefited by the injections. He was struck with the statement so often made that the treatment had begun in about the third or fourth week of the disease. That was about the time the disease got well of its own accord in many cases.

Dr. L. A. COFFIN said he had enjoyed the paper—that he felt much like Dr. Robinson as to having a tube or an injection put into his own trachea, but he thought he might feel entirely different on the matter had he been told that he had tuberculosis, and that the intratracheal injection offered any kind of hope or relief. He said he thought the injections could be made without harm, and in fact that he had seen apparently wonderfully good results follow both intralaryngeal and intratracheal injections.

Dr. NICHOLS said he thought the medicine carried by the oils was absorbed, but did not think the oil was. All knew it was hard to introduce the tube into the trachea, and during the last year he had gotten good results from the use of a multiple comminuter spray, consisting of a series of chambers, any one or all of which could be used at once. It was really a lung bath, and at the same time the mucous membrane was bathed in an oily solution. He thought the method of intratracheal application was a practical one.

Dr. WENDELL C. PHILLIPS said he had tried intrapulmonary injections several years ago in a series of cases, and, so far as he knew, the patients were all dead. This experience had made him somewhat sceptical as to all these methods of treatment. In subacute tracheal and bronchial cases the intratracheal injections might be helpful, but he had grave doubts as to any benefits to be received in acute cases. About four times a year he had attacks of acute catarrhal laryngitis, with loss of voice. He had treated himself, and had also been treated by various specialists, and sometimes had allowed it to go with no treatment, but had found that he recovered in about the same time, whether treated or not. He agreed with Dr. Robinson that cough medicines were useful in many cases.

Dr. W. K. SIMPSON said he grew more conservative as he contemplated new measures which were radical in their nature. He thought it was too much to think that intratracheal or bronchial injections could cure tuberculosis, but they undoubtedly were efficacious in relieving troublesome cough. He thought from experience that intralaryngeal, tracheal, and bronchial injections were among the most rational, if not the best, means of applying local applications to those parts. He agreed with the writer that we should be good chest diagnosticians, so as to differentiate the various kinds of cough.

Dr. BERENS thought almost any volatile substance was absorbed by the lungs, but injection by the trachea for the disease of the smaller bronchi could hardly have any effect, as the injection of a dram or so would scarcely reach all of them.

In the treatment of the large tubes and the trachea he thought the intratracheal injections were called for. He had had excellent results in

two cases in which he had tried it. He had also used the multiple comminuter with excellent effect. Rest was one of the most important factors in the treatment of acute laryngitis.

In closing the discussion Dr. BARTON said it was not claimed that intratracheal injections would cure tuberculosis, but relieved the distressing cough. He thought dispensary patients were the class in which it was hard to get favourable results, but he had patients who took this treatment, and were glad to come to his office every day for the relief it gave them. He had cured cases of trachitis and bronchitis that had resisted other treatment, and he thought that intratracheal injections were worthy of unprejudiced trial.

T. P. Berens.

THE AUSTRIAN OTOLOGICAL SOCIETY.

Meeting, January 28th, 1896. ("Monatsschrift für Ohrenheilkunde," Feb., 1896.)

Prof. GRUBER. *A Case of Coloboma of the Auricle. Successful Plastic Operation.*

The patient was a man, aged twenty-two, with a congenital fissure of the left auricle. It passed through the whole auricle from the helix forward, and so divided it into two parts, of which the lower one included the antitragus and the lobule, the upper one the remaining part of the auricle. The edges were covered with normal cutis, and the various parts were properly developed. The lobule was attached along its whole anterior border to the side of the face. The portion of the auricle above the fissure stood out from the side of the skull at an angle of seventy-five degrees, while the part below was at an angle of thirty degrees. The deformity was, therefore, more obvious when the patient was seen from the front. The edges of the split could be easily brought together, but the upper part remained in its original position. It was therefore necessary to close the fissure, and at the same time to fix the upper portion in a more normal position. The edges of the fissure were freshened and united by means of sutures. It was then seen that the skin of the posterior surface of the auricle retracted more than that of the anterior. Prof. Gruber first brought together the margins of the skin on the anterior surface, taking care to bring about perfect apposition so as to prevent an unsightly scar or any incompleteness in the union of the helix, and then afterwards treated the posterior surface. In order next to approximate the upper part of the auricle to the side of the head, he made two incisions behind it of about five centimètres in length, which were curved with a concavity forward, and with ends uniting at a narrow angle above and below. The portion of skin included by this was dissected off and removed. The edges of the bare place were then, after stoppage of the blood, brought together with fine stitches. Antiseptic dressing was then applied, and left undisturbed for eight days. The result was perfectly successful.

Prof. URBANTSCHITSCH. *A Case of Otitic Temporo-Sphenoidal Abscess without Focal Symptoms.*

A girl, aged fourteen, had suffered for six months with suppuration from the left tympanum. In the middle of December she was attacked with headache and vomiting, and on the 24th of the month was unconscious for several hours. When seen on the 25th December the radical operation was at once performed. The antrum was found to be enlarged, and along with the attic was filled with detritus and cholesteatomatous masses. The incus was absent; the malleus was removed and found healthy. There was a small portion of dura mater uncovered over the tegmen tympani. There was considerable bleeding during the operation, probably from a branch of the middle meningeal artery, but it was checked by an iodoform gauze plug in ten minutes. The patient seemed much better after the operation. The wound pursued a favourable course and cerebral symptoms completely disappeared; but a week after the operation there was a slight frontal headache and a degree of drowsiness, although the child was otherwise perfectly well and replied to questions. On the 9th January death took place quite suddenly, and on *post-mortem* examination there was found an abscess of the size of a hen's egg in the lower temporo-sphenoidal lobe of the affected side. It had a thick capsule, indicating that it must have lasted from three to four months, and between it and the tegmen tympani there was an apparently normal layer of healthy brain. Around the abscess there was œdema, and this was probably the immediate cause of death.

Prof. URBANTSCHITSCH. *A Case presenting Focal Symptoms without Abscess.*

This was a woman, aged thirty-four, who had suffered from chronic suppurative otitis of the left ear for three years. During December, 1895, she had had attacks of occipital pain, stiffness of the neck, giddiness, faintness, and occasional mental confusion. When the patient came to the polyclinic on the 2nd January for operation there were evidences of meningitis, and a temperature of forty degrees Centigrade. The antrum was opened, and along with the attic was found to be full of cholesteatoma, while the roof had a perforation through which the dura mater was exposed. The ossicles were extracted and found to be healthy. Flap transplantation was carried out according to the Thiersch-Siebenmann method. The patient went on very well to the 6th January, when the temperature rose from 39 degrees to 40·6 degrees; there was then increasing conjugate deviation of both eyes: the head was turned towards the left, and any attempt to rotate it towards the other side was extremely painful, while it was only with great difficulty that a slight movement of both eyes towards the right side could be accomplished: consciousness appeared to be intact. Later in the day there came on complete aphasia with monophasia, and after it monolalia. She could only pronounce one word, "dableiben," and later a single syllable—for example, "blei—blei—blei." Next day there appeared paresis of both extremities of the right side, with contracture and heightened reflexes, along with anæsthesia and analgesia. The extremities of the left side

appeared, on the other hand, to be hyper-algesic. In spite of the possibility of there being an abscess in the left temporo-sphenoidal lobe, Prof. Urbantschitsch decided not to carry out any further operative interference in view of the pronounced meningeal symptoms and the depressed condition of the patient. Death took place two days later, and there was found chronic internal pachy-meningitis, and purulent pachy- and lepto-meningitis. The inner surface of the dura mater over the left hemisphere was covered with a thick fibrino-purulent false membrane. The meninges at the base, round the chiasma and further back over the pons and medulla, as also on the convexity of the left hemisphere along some of the sulci, were infiltrated with a sero-purulent exudation. There was no cerebral abscess.

Prof. URBANTSCHITSCH. *Revolver Shot in the External Meatus.*

The projectile was removed by means of operation requiring the chiselling away of a portion of the posterior wall of the meatus. The bullet had passed along the meatus without wounding it into the tympanic cavity, where it flattened itself out against the promontory. The patient was perfectly deaf in this ear. After the removal of the projectile, the promontory was found to be pressed inwards without being broken through. On the second day after the operation, when everything was otherwise favourable, there came on facial palsy, which, within a week, eventuated in complete paralysis. Prof. Urbantschitsch attributed this to pressure on the exposed nerve, and applied the induced current; but this produced no improvement in a week, and he then practised mechanical stimulation of the facial nerve by rapid percussion of the paralyzed muscles, which he had in a previous case found to be of value. Each time it produced a distinct increase of the muscular action, and it was continued in combination, with the use of the induced current. Almost complete recovery took place after six weeks' treatment.

Prof. URBANTSCHITSCH. *A Sequestrum formed by the Complete Cochlea.*

This was removed from the right ear of a woman, and, after its extrusion, the tuning-fork placed on the vertex was heard more loudly in the affected than in the other ear. Three months later the patient began to be doubtful about the subjective localization of the sound, and after another month she heard it more on the sound side than on the affected—a condition which has continued ever since.

Prof. Urbantschitsch remarked that this case might be looked upon as a confirmation of Ewald's opinion, that the trunk of the auditory nerve, after the removal of the peripheral end organ, was still capable of receiving auditory impressions; and that, in this case, it was only several months later, as the result of consecutive atrophy of the nerve, that this capability had disappeared. He thought that the lateralization of the sound in the ear which had lost the cochlea was to be attributed to the uncertainty attaching to the observation. Ewald's view could only be confirmed by preservation of the hearing faculty in a case of bilateral extrusion of the cochlea. Hitherto he had only come across a description of one case—that of Dr. Max; but in it there was bilateral complete deafness.

Prof. GRUBER was of opinion that a partial loss of the labyrinth did not bring about total deafness, and he related three cases observed in his practice illustrating this. He thought that there still remained something to be learned about the functions of the different parts of the labyrinth.

Dr. MAX adhered to the views at present dominating.

Dr. BING thought that the terminal nerve operating in the semi-circular canals reacted to certain stimuli as a co-ordination organ, but to others as a sound-perceiving one.

Dr. POLLAK showed an extruded cochlea, which he had removed by syringing from the right ear of a patient with chronic purulent otitis media. He lay for several months unconscious and hemiplegic in a medical ward, and after his discharge from there suffered for a considerable time from vertigo and uncertainty of gait. Hearing tests revealed complete deafness of the right ear for all sorts of tones, both by air and bone conduction. The fork on the vertex was lateralized in the left ear—the sound one. Disturbances of co-ordination were for the moment absent, but with his eyes closed the patient could not stand upon one leg. Electrical investigation of the ear with the anode on the left forearm, and the cathode on the right tragus, with a current of five milliamperes, produced on cathodal closure a buzzing sound in the affected ear. Dr. Pollak was therefore of the opinion that the trunk of the auditory nerve is capable of conveying sensations of hearing when it is stimulated by means of an electrical current.

Dr. POLLAK. *Carbolized Gelatine Amygdale Aurium (Aural Ovoids).*

He had had some of these prepared after Prof. Gruber's pattern, but containing ten per cent. of carbolic acid. He used them chiefly in circumscribed external otitis, and found that they very rapidly relieved the pain, and in about seventy per cent. of the cases aborted the morbid process. Impressed by these favourable results, he made use of them in the early stages of acute median otitis, and found that the sedative and abortive effect of these carbol gelatine bougies was much prompter than that of the ten to twenty per cent. glycerine of carbolic acid recommended by Hewetson.

Dundas Grant (Trans. and Abs.).

VIENNA SOCIETY OF LARYNGOLOGISTS.

Meeting. June 7th. 1895.

[The report of this meeting is contained in the JOURNAL, January, 1896, of which the following is the concluding portion, for which we are indebted to the "Ann. des Mal. de l'Oreille," April, 1896.]

CHIARI remarked, *à propos* of Panzer's communication, that he had had scissors constructed similar to those described for extirpation of the turbinateds. He ordinarily used the galvano-cautery for hypertrophied turbinateds, but in very narrow nares he often simply incised with scissors. It was frequently necessary to use the cold snare and gouge; with scissors there is frequently great hæmorrhage, requiring tamponing.

Chiari remarked as to Roth's case that perhaps he had to deal not with an abscess of the substance of the pharyngeal tonsil, but with a suppuration of the cicatricial tissue above or behind that structure. The pharyngeal tonsil is lax and riddled with clefts, so that it may form small abscesses, easily opening, and not suppurations of slow evolution. A retro-pharyngeal abscess may also form in the upper portion of the pharynx in the fornix, and in its development push forward the whole mass of the pharyngeal tonsils. The condition described by Roth may be thus produced. The deep seat of the suppuration in Roth's case is explained by the long duration of the fever and the disease, the œdematous tumefaction of the neighbouring parts, and the gravity of the affection. He had recently observed a case of suppuration recurring frequently, though transient, in the nasal pharynx. The patient, now aged forty-eight, had, when a child, undergone many operations, sometimes with the galvano-cautery, for nasal polypi. When a young girl she had often suffered from great nasal secretion and obstruction. For ten years she had frequent coryzas. On December 28, 1894, after a chill, she suddenly experienced violent headache, rigidity of the cervical region, and pains in the pharyngeal region, preventing her from swallowing. She had fever, and twelve hours afterwards some purulent foci of the upper portion of the pharynx behind the nose were discharged. The fever fell and pains disappeared, leaving some feebleness for a few days. Four weeks afterwards she felt a slight twinging in the nasal pharynx, which lasted for three days; at the end of the third day the symptoms above described reappeared, and went through the course. The crises recurred on March and at the commencement of May. Examining the pharynx on the 12th May, he found Luschka's gland hypertrophied and knobby reaching nearly to the septum. The chief hypertrophy was in the middle part, the lateral portions of the pharyngeal tonsil scarcely extending beyond the upper border of the choanae. He removed this hypertrophy with the cold snare, and found it to consist of numerous cones and projections, separated by cavities enclosing mucous and yellow detritus. There was no important cyst nor sac filled with pus. He believed these acute suppurations to arise only in the pharyngeal tonsil, the ablation of the hypertrophied portion of which prevented the recurrence of these attacks, there being no longer any place for the retention of secretion.

Meeting, November 7th, 1895.¹

President—Prof. SPOERK.

WEIL presented a patient, aged twenty, with a *Naso-Pharyngeal Tumour*. Numerous polypi had previously been removed during two years from the left nostril, and examination on September 2nd showed

¹ A short abstract of this meeting appeared in our last issue, but we insert a full account on account of the great general interest of the meeting.—*Ed.*

the left naris completely obstructed, the right free, but both filled with muco-purulent secretion. A large adenoid covered nearly all the left posterior choana and the upper part of the right. With Gottstein-Gruber's ring knife several portions were removed, having the consistence of ordinary adenoids. There was very little hæmorrhage. Then the right choana was freed, but the left remained covered, and small growths covered with pus could be seen extending nearly to the velum. There was profuse hæmorrhage on their removal by the hot loop, and several days' interval was requisite between each operation. The tumour grew rapidly, and was seen to be very red, smooth, elastic, attached to the anterior part of the roof of the pharynx and upper edge of the left choana, the septum, and palate. Histologically it proved to be a naso-pharyngeal fibro-sarcoma. Weil did not recommend surgical intervention, on account of the anæmic condition of the patient and probable dangerous hæmorrhage, but he would try electrolysis.

ROSCHIER had seen Weil's patient during the summer of 1894. He then had a large naso-pharyngeal tumour with the typical appearance of a fibroma. This was removed with the cold snare. It was found to be a myxo-fibroma, and he doubted that the specimen shown by Weil was a fibro-sarcoma, the richness of the specimen in round cells rather suggesting a round-celled sarcoma. The treatment would depend upon the histological examination. If a fibroma, it would be better to operate radically; but if it were a round-celled sarcoma no benefit could accrue from operation. With electrolysis there is still less hope of radical disappearance of the tumour, and it is very probable that electrolytic treatment would stimulate its growth. It would be preferable to limit treatment to expectant measures, as in inoperable tumours.

SCHEFF related a case of *Naso-Pharyngeal Tumour* which at first gave the impression of a naso-pharyngeal polypus. In six months it grew rapidly—the left nostril was so filled with polypi that the nasal wall was bulged, and there was asymmetry between the two sides of the face. There was retraction of the palatine arch, and behind the uvula a fœtid gangrenous mass. After its removal the whole naso-pharyngeal cavity was found to be obstructed by an irregular tumour occupying the whole left choana. There were growths in the right nasal fossa obstructing it. An operation undertaken for the removal of the growth revealed the fact that the sarcoma had invaded the left orbit and extended to the base of the skull, and radical removal was, therefore, abandoned. The patient afterwards succumbed to suppuration, provoked partly by the penetration of the tumour into the cranial cavity, and at the autopsy it was discovered that the tumour originated, not from the nasal roof, but from the sphenoidal sinus.

RETHI thought that in such cases one ought to wait, having regard to the age of the patient, for we see cranial penetration simultaneously with retrogression of the tumour. The patient did not suffer, and life was not in danger. The growth of the tumour was slow, since it took two years to attain any size, and we know that every surgical interference favours rapidly increased growth, and sometimes recurrence.

CHIARI considered Réthi's remarks correct, for he had often seen

fibro-myxomata disappear spontaneously in young subjects, but never round-celled sarcomas, which go on increasing whether the patient be old or young.

RETHI replied that these tumours have no particular histological structure, often containing a quantity of round cells, so that the tumour has a sarcomatous character.

WEIL replied that he was aware of the fact of spontaneous retrogression, but it could not be considered here. He did not think that the growth in this case sprang from the sphenoidal sinus. If rhinologists so frequently perforate this cavity, there can be nothing to fear in penetrating it with an electrolytic needle, and the patient cannot be left without treatment. Authors variously denominate these tumours naso-pharyngeal, fibroma, and fibro-sarcoma. As Schmidt says, they often enclose round cells, and are then fibro-sarcomas, which have none of the malignity of sarcoma.

In the author's case Prof. Paltauf diagnosed a new formation of fibrous character, containing round cells especially numerous at the upper layer, and traversed by vessels with rich cellular tissue round them, the cells being fusiform, or formed of cicatricial tissue: the round cells being of inflammatory origin.

PANZER. *Empyema of the Nasal Sinuses.*

The patient exhibited, aged seventy-three, had influenza in April, 1894, and subsequently was left with violent frontal and occipital pains and copious muco-purulent discharge from both nares. Both nasal fossae were totally obstructed by muco pus, and bilateral suppuration was found to be constant in each middle meatus. The left upper eyelid was slightly cedematous. The supra-orbital notches were sensitive to pressure, especially the right. Probing and irrigation of the right frontal sinus gave exit to much pus, but there was still pus in the middle meatus. Exploratory puncture of the antrum of Highmore revealed the existence of much pus. It was therefore entered through the alveolus, irrigated, and tamponed after Chiari's method. The ethmoid cells on the left enclosed much pus. These were perforated, scraped, granulations removed, and irrigated. The pains of the left frontal region ceased, but those on the left persisted. The left antrum of Highmore and frontal sinus were entered, both being found full of pus. The latter was entered by an incision parallel to the superior orbital ridge, and drained through the nose. After operation oedema of the eyebrows and displacement of the eye outwards and downwards occurred, disappearing slowly in the course of three weeks, and the diplopia also disappeared. The drainage tube was removed after fifteen days. The wound healed perfectly. The author also entered and washed the sphenoidal sinus. The patient subsequently practised irrigations himself and the cephalalgia disappeared. Three months after operation the suppuration and discharge had ceased.

STOERK recorded the case of an engineer, aged sixty, who suffered from *Typical Right-sided Headache*. The middle turbinated was pushed so high that a diagnosis of derivation of the discharge from the frontal sinus was justified. Having removed the middle turbinated the canal

could be found, and Stoerk entered it with a sound mounted with nitrate of silver. After enlarging the passage by numerous cauterizations, the patient was encouraged to sound himself, and he learnt to wash out his own frontal sinus. The discharge from the frontal sinus is now quite easy and cephalalgia has ceased. But there is an extraordinary quantity of pus, and it is scarcely credible that the frontal sinus could contain such a quantity, and Stoerk believes that there must exist a communication with the maxillary sinus.

CHIARI. *Naso-Pharyngeal Mucous Polypi (with demonstration).*

Chiari communicated details of seventeen operations, of which he gave particulars. In five cases the polypi enclosed large cysts, containing a clear yellow serous liquid. Three times these burst spontaneously. Histologically they were always ordinary mucous polypi. He employs various methods for their removal. If the nose is free, or rid of the polypi which obstructed it, he endeavours with a cold snare to extract the growth through the nose, partially separating it, and then tearing it from its place of implantation. Under cocaine this process is nearly painless, and very rapid. He has operated in this manner six times. Sometimes, when the tumour is situated transversely, obliterating the right choana completely and the left partially, he seized the tumour with the loop and removed a portion. Then through the right nasal fossa, with cold snare or forceps, he seized the rest of the tumour and pushed it into the nostril, whence it was extracted entire or in fragments. This he did in five cases. Once he operated with the loop in the nose and the index finger in the nasal pharynx. If the nasal meatus was too small, or the tumour so large that the cold snare could not reach it from the front, Chiari succeeded by introducing pharyngeal forceps or a curved cold snare through the mouth, after cocainization of the pharynx. Four of these tumours exceeded the size of an apple, and were very easily detached from their base. Tumours of this volume drag on the pedicle and allow it to become thin and to lose all force of resistance. Twice the long thin pedicle was attached to the anterior portion of the middle turbinated; once it was shorter and sprang from the posterior part of the external nasal wall, between the middle and inferior turbinateds.

Of seven cases of nasal pharyngeal polypi, only once was there recurrence, this being much more frequent when there are nasal polypi simultaneously.

RETHI remarked that in three cases of extensive growth he had been able to extract the tumour by introducing the snare through the anterior nares, but in two patients he used a crotchet introduced through the middle meatus anteriorly, detaching the pedicle from the middle turbinated. He recommends the use of the crotchet when the cold snare cannot be used, the nasal cavity being so small that forceps introduced hide the visual field.

A handle to carry the galvano-cautery snare devised by Dr. SCHEFF was presented. It is characterized by great ease of manipulation.

R. Norris Wolfenden.

DUTCH SOCIETY OF LARYNGOLOGY, RHINOLOGY. AND OTOTOLOGY.

Third Annual Meeting, 9th June, 1895 (continued). ("Monatschrift für Ohrenheilkunde," Feb., 1896.)

Dr. SIKKEL. *Demonstration of a Cast of the Upper Jaw in a Case of Nasal Obstruction.*

This was from a boy, aged fourteen, who had always suffered from a nasal obstruction, and from whom a mass of adenoid vegetations had been removed. The cast showed Gothic arching of the hard palate, bending of the alveolar arch in the middle line so that the mesial incisors formed an acute angle, and sinking inwards of the lateral parts, as the result of the pressure of the cheeks during the continuance of the open position of the mouth. The left lateral incisor was absent: the right was only represented by an atrophic residuum.

Dr. SIKKEL. *Two Cases of Rhinolith.*

The first occurred in a girl aged seventeen, and the kernel was found to consist of a cherry-stone: the second, in one aged twenty-one, contained no foreign body, and was, therefore, a pure rhinolith.

Dr. SIKKEL. *Foreign Body in the Larynx.*

The patient complained of pain arising from a bone which had stuck in his throat whilst he was eating codfish. On the first examination a small bleeding point was seen on the left tonsil: nothing in the larynx. On more thorough examination there was observed on the left side wall, immediately above the pyriform sulcus, a white streak, about three-quarters of a centimetre in length. With the probe it could be made out that the white streak projected and adhered firmly to the wall. It was seized by means of Schroetter's forceps. At first a movement downwards was made, and then a fish-bone 4.5 centimetres in length was extracted.

Dr. SIKKEL. *A Congenital Fibroma of the Nose.*

This was a soft growth of the size of a canary's egg, occupying in great part the right ala and to some extent the dorsum of the nose of a boy, aged four. At birth it was already of considerable size. It caused considerable projection of the mucous membrane into the lumen of the nose. The tumour was dissected out through a skin incision, the nostril being plugged, and the outer skin wound united by means of stitches. Union took place in a few days. After four months the form of the nose was almost natural. The growth was found upon microscopical examination to be a fibroma, with few nuclei and a large quantity of connective tissue.

Prof. H. ZWAARDEMAKER. *On Toyne's Oscope.*

The speaker held that as the instrument was generally constructed of materials which conducted sound very badly, the conduction took place

almost entirely through the air which it contained, and on this account it was advisable that the lumen should be as wide as possible.

In illustration of this he described an experiment, comparing the length of time during which a C² tuning-fork fixed on a resonating base was heard through a wide and narrow otoscope respectively, the times being sixty-five and fifty-three seconds. It is, therefore, advisable to have the tube of such a calibre as to correspond to that of the external meatus, and, as a rule, a diameter of six millimètres is the most suitable, and this should apply to the earpieces as well as to the india-rubber tube. The instrument should go deeply into the ear, which is only possible when the walls of the tube are thin. The speaker did not think that resonance (sympathetic vibration) came into play in the use of the otoscope. It was a tube closed at both ends by the tympanic membranes, and, therefore, under all circumstances there was an internode at each end and a nodal point at the middle. In the case of an otoscope of 85 c.m., the wave length of the proper tone of the instrument would be 170 c.m. Its vibration number would be 195 d.v. Such deep tones would hardly ever come under observation during the use of the otoscope. Since in the otoscope as contrasted with the stethoscope the conduction through the walls does not come into play, there is nothing gained by using a binaural instrument.

Dr. BRONDGEEST : The opening in the earpiece is always smaller than the diameter of the tube.

Dr. ZWAARDEMAKER : The diameter of the earpiece ought to be six millimètres, and the thickness of its walls as slight as possible.

Dr. SIKKEL : Has the speaker measured the duration of vibration of the tuning-fork after slow and quick release of the spring respectively ? Lucae's tuning-fork does not have a constant force of stroke.

Dr. ZWAARDEMAKER replied that Lucae's tuning-fork was not always constant when you caused it to vibrate for a long time ; but in the experiments which were carried out the mode of operation was identical, so that the comparisons were perfectly reliable, and he was sure that no mechanical or mental differences could affect the result.

Prof. GUYE : The tube is ordinarily attached very badly to the ear-piece, namely, by means of an intermediate tube which has a lumen of not more than from two to three millimètres. This should not be.

Prof. ZWAARDEMAKER. *On the Degree of Hearing Power necessary for Telephonists.*

The writer carried out investigations with the ordinary apparatus used for intercommunal purposes. He found that a hearing power of 1 mètre for whispers allowed of only a few words being heard by the telephone ; with 1.5 mètres the greater part of a formula ; with 2 metres most words were understood, but it was only with 4 mètres that the whole of a sentence could be repeated, and then only with considerable effort ; with 6 mètres a certain amount of difficulty still remained, and it was only with 7 mètres that a sentence could be quickly and easily followed.

Prof. GUYE thought it worthy of remark that the public in general

found the left ear better for telephone use, while the officials at the Central Station made more use of the right one.

Dr. MOLL asked whether investigation had revealed any injurious influence on the hearing.

Dr. ZWAARDEMAKER said that none had been observed. A few cases had been mentioned in the literature, but in Holland none such had been recognized among the postal officials; but it was an unquestionable fact that telephoning, and especially telephone service, entails a great strain on the nervous system, and can give rise to neurasthenia.

Dr. ZWAARDEMAKER. *A few Exceptional Auditory Fields.*

In the first instance he showed three "fields" from patients with fracture of the base of the skull, and compared with them cases of labyrinthine deafness from syphilis and from mumps, as also from simple sclerosis, from sclerosis complicated with quinine poisoning, and from labyrinthine deafness resulting from artillery fire. Another was from a case of retinitis pigmentosa—a family affection. There there was a very peculiar form of deafness. The lower range of the scale was found on both sides to extend down to E² (? E— ϵ) (20 d.v.); the upper range to A⁶, and on the left side A⁵.

Between these extremes there was a comparatively even reduction of hearing power. The auditory field was on the right side one-third and on the left side a quarter of the normal.

The case gave the speaker the opportunity of pointing out the analogy between hemeralopia and the paracusis of Willis. In both cases the functional activity was diminished when the degree of light or of sound in the neighbourhood was weakened. On the other hand there was improved function when the source of stimulation was strengthened. In both cases there were disturbances of nutrition at the periphery of the visual or auditory field, which in retinitis resulted from the displacement of pigment, and in paracusis from the threatening loss of the upper zones of the scale.

Finally Dr. Zwaardemaker showed two auditory fields from cases of gradually developing labyrinthine deafness. One of these showed a hiatus at that part of the scale which corresponded to the patient's subjective noise. Here, therefore, there occurred complete loss of function, along with an internal source of irritation of considerable duration.

Prof. GUYE considered the comparison of paracusis with hemeralopia particularly interesting, as he was convinced that the former had its origin in the auditory nerve, and had nothing to do with the ossicles of the middle ear.

Prof. GUYE. *On a Peculiar Rotatory Sensation in Labyrinthine Disease which has not hitherto been described.*

(*Vide JOURNAL OF LARYNGOLOGY, RHINOLOGY, AND OTOTOLOGY, May, 1896, page 254.*)

Dr. SIETHOFF had recently treated a neurasthenic patient whose ears were perfectly normal, and along with migrainous attacks had exactly such rotatory sensations. Another patient, a female, who suffered from

slight catarrh of the middle ear, with Ménière's symptoms, described her rotatory sensations in exactly a similar way. She had swelling of the mucous membrane of the posterior extremity of the inferior turbinal. The vertigo disappeared at once on the application of cocaine to the part, and after the removal of the posterior extremity of the turbinal the Ménière's symptoms returned no more. He was disposed in this case to attribute the peculiar form of vertigo to neurasthenic influences rather than to an affection of the labyrinth.

Prof. GUYE said that without doubt in many patients suffering from Ménière's disturbances the trouble was partly of a nervous nature, but we had to be careful lest we should too readily ascribe disturbances to neurasthenia. He thought it probable that in Dr. Siethoft's second patient there was a temporary disturbance (hyperæmia) in the vertical semicircular canal as cause of the vertigo.

Dr. BULGER thought the description interesting, but the association of it with diseases of a semicircular canal, hypothetical on the whole, could only be cleared up in two ways: *post-mortem* examination and physiological experiment.

Prof. GUYE agreed that there was a hypothetical element, but he considered it most desirable that such cases should be carefully observed. In his patient one ear was completely deaf.

Prof. ZWAARDEMAKER drew attention to two simple means of experiment in such cases: the ordinary piano stool, which Von Kreidl had employed in investigating the labyrinth in deaf mutes, revolving it while the patient was sitting on it, and the ordinary rocking chair.

Dr. ACH MOLL. *The Treatment of Acute Diseases of the Accessory Cavities of the Nose.*

In acute catarrh, with swelling of the mucous membrane, there was inevitably a closure of the orifices of the accessory cavities, and, resulting from this, neuralgia, failing of weight, and other discomforts, which ordinarily disappeared without treatment; but, in many cases of rhinitis following influenza, these disturbances persisted. Applications of cocaine or menthol very often produced no effect: and the same was the case with the employment of Politzer's air douche, as recommended by Hartmann. He had seen inflammation of the middle ear follow this treatment, and was inclined to think as the result of it. On the whole, he would reject any method involving compression of the air in the cavities. On the other hand he attributes great value to aspiration; and his method of clearing the cavities was as follows: the mouth and nose are tightly closed, and then the chest is vigorously dilated as in inspiration. In this way there is a diminution of pressure in the accessory cavities and the liquid contents are drawn out. He had proved a lowering of pressure to the extent of fifteen millimètres in a case in which he had made a perforation in the alveolus. He described a severe case in which there was relative opacity on transillumination; and, having cleared away all pus from the nasal cavities, the patient was directed to close the nose and dilate the chest, as above described. Pus was again seen in the nose and the pains were considerably diminished. The patient was

recommended to repeat the experiment every two hours, and very soon complete recovery took place.

Dr. REINHARDT asked whether Dr. Moll had found serous collections of fluid in the accessory cavities, as lately recorded by Noltemus. He had himself made frequent punctures, but without similar results.

Dr. MOLL had never found a serous exudation; but he avoided making exploratory punctures in acute affections.

Dr. BULGER had seen several cases such as described by Dr. Moll, after influenza, which had recovered spontaneously. He attributed great value to transillumination in such cases. He recommended frequent irrigations through the nose under slight pressure.

Dr. MOLL agreed that spontaneous recovery could take place; but he had seen cases which remained stationary for several weeks, and only recovered when the aspiration method was practised. The pressure pain disappeared, as a rule, immediately after the aspiration.

Dr. P. Q. BRONDGEEST. *The Treatment of Lupus and Tuberculosis of the Larynx in Advanced Stages.*

Founding upon several communicated cases, the writer advised that the treatment under these circumstances should be as vigorous as possible; and he considered it indicated to remove all diseased tissue by means of the thermal cautery, after the performance of laryngotomy. This treatment should be resorted to when cure is not brought about by endo-laryngeal means. In lupus, which often attacks the epiglottis so severely, this part must be removed completely by means of sub-hyoid pharyngotomy; and, should the interior of the larynx be affected, laryngotomy (thyrotomy) should be carried out shortly after. Finally, he raised the question as to whether, in commencing tuberculosis of the larynx, it was not desirable to remove all diseased tissue by means of laryngo-fissure.

Dundas Grant Trans. and Abs.

BRITISH MEDICAL ASSOCIATION.

Meeting, July, 1896.

ABSTRACT OF PAPER.

The Operation of Thyrotomy. By PHILIP DE SANTI.

The following is a short abstract of the paper I read on the operation of thyrotomy, especially in relation to its efficacy in the treatment of malignant disease of the larynx, at the last meeting of the British Medical Association, held in London in August last.

The cases that I have been able to make use of are those that have been in the hands of Mr. Butlin, both in his hospital and private practice, during the last fifteen years. I am much indebted to him for giving me access to his notes.

In the "Lancet" of December, 1894, a paper was published by Dr. Felix Semon, "On the Results of Radical Operation for Malignant Disease

of the Larynx from the Experience of Private Practice." His results are most encouraging, and he strongly advocates the operation in suitable cases.

At St. Bartholomew's Hospital, my old *alma mater*, Mr. Butlin has performed thyrotomy seventeen times, as follows :—

In 7 cases for intrinsic malignant disease.

In 2 cases for extrinsic malignant disease, 1 of the latter being a secondary thyrotomy for a recurrence.

For innocent tumours. 6 thyrotomies on 5 patients.

For other causes (exploratory, etc.), 2 thyrotomies on 1 patient.

In private practice he has performed 11 thyrotomies—

7 for intrinsic malignant disease, 1 being exploratory, and 1 a second thyrotomy for recurrence.

2 for extrinsic malignant disease and disease of uncertain nature.

2 for innocent tumours.

Total of these cases—

For intrinsic malignant disease 14 thyrotomies on 13 patients.

For extrinsic " " 4 " " 3 "

For innocent tumours 8 " " 7 "

For other causes 2 " " 1 "

Total, 28 thyrotomies on 24 patients.

His results have been as follows :—

Of the thyrotomies for intrinsic malignant disease 14.—

1 death from the operation itself.

3 cases too extensive for removal.

5 cases recurrence.

2 cases, patients quite well three years after.

1 case a complete cure. (Death five years after from internal disease of uncertain origin.)

1 case quite well a year after (May, 1895.)

1 case for supposed malignant disease : quite well up to the present.

Of the thyrotomies for extrinsic malignant disease (3 cases)—

1 death from the operation.

In the other recurrence occurred, and a second thyrotomy was performed two years subsequently ; within another two years recurrence took place in the cervical glands, death following an attempt to remove them.

For innocent tumours, etc., not a single death occurred, and 6 out of 8 patients were completely cured.

These results are sufficiently good to warrant the performance of thyrotomy in suitable cases, and offer a greater chance of permanent relief than any other treatment advocated.

The dangers of exploratory thyrotomy, and of thyrotomy for the removal of intrinsic malignant disease, are decidedly small if the details of the operation and the after-treatment be properly carried out.

The Operation of Thyrotomy.—The patient should be anæsthetized, with chloroform preferably, as ether excites the secretion of much mucus and saliva, which obscure the parts to be removed : an incision is made mesially from the upper border of the thyroid cartilage to about one

and a-half inches below the cricoid. The trachea is exposed and opened and a Hahn's compressed sponge canula inserted. After the lapse of ten to fifteen minutes the compressed sponge will have expanded sufficiently to prevent entry of blood into the larynx, and the parts over the thyroid are divided and the cartilage exposed and divided mesially with bone forceps or small saw. The alae are then held aside, and the interior of the larynx is painted with a five per cent. solution of cocaine to diminish the sensibility of the parts.

Two elliptical incisions are now made round the diseased tissues, going wide of them, and down to the perichondrium: the growth is seized with forceps, and removed, together with the mucous membrane, with curved, sharp-pointed scissors. The base is sharp-spooned, the interior of the wound dusted with iodoform, and *the Hahn's canula removed at once*. This is important, as septic infection has followed the retention of the sponge canula for twenty-four to forty-eight hours. The whole external wound is left open, being covered with a layer of iodoform gauze.

For innocent growths avoid sharp-spooning, and suture the thyroid alae accurately together with fine silver wire.

After-Treatment.—Keep the patient on the side corresponding to the half of the larynx operated on, and the head low. Feed the patient for the first day or two on nutrient enemata: on the day subsequent to the operation try to give fluids by the mouth, the patient being made to sit up and lean well forwards. Give water as a trial: if it gets into the larynx it at once runs out through the wound: should it be successfully swallowed, beef tea, milk, etc., are given.

The wound must be carefully dusted with iodoform daily. During the act of swallowing the two lips of the wound into the larynx separate sufficiently to allow of the introduction of the nozzle of an insufflator between them. As a rule there is but little constitutional disturbance, and the wound rapidly heals by granulation.

For the full details of the individual cases, including the occupation, sex, and age of the patients, whether hospital or private case, part of the larynx affected, symptoms, nature of growth, date of operation, operator, method of operation, parts removed, results of operation, and condition when last seen or heard of, reference must be made to the table published with my paper in the "British Medical Journal" of October 26th, 1895.

ABSTRACTS.

DIPHTHERIA, &c.

Clubbe, C. P. B., and Litchfield, W. F.—*A Short Account of the First One Hundred Cases of Diphtheria treated at the Diphtheria Branch of the Sydney Children's Hospital with Antitoxin, in comparison with the One Hundred Preceding Cases treated without.* "Australasian Med. Gaz.," Feb. 20, 1896.

THE two series of cases were treated in the same place, in the same way, and under exactly similar conditions, the only difference being the injection of antitoxin in the last hundred cases. In all of the cases the Klebs-Loeffler bacillus was found. The results were as follows:—

First Hundred.		Cured.	Died.	Death Rate.
Tracheotomies	59	19	40	67·7
Simple diphtheria.....	41	30	11	26·8
Total.....	100	49	51	
Second Hundred.		Cured.	Died.	Death Rate.
Tracheotomies	48	29	19	39·5
Simple diphtheria.....	52	48	4	7·6
Total.....	100	77	23	

A further consideration of the results shows that the injection of antitoxin tends to obviate the necessity for opening the trachea: and when tracheotomy is required the tube can be removed earlier than in those cases which have not been treated with antitoxin.

The day of disease at which antitoxin is injected is very important and influences the death rate. While recognizing the advantage of injection at the earliest possible date, the authors do not agree with those who assert that it does no good after the fourth day; in the seventy-seven cases of the second series that recovered, the fifth was the average day of disease at which antitoxin was employed.

The average duration of the membrane in the throat was, in the first series, ten days; in the second series four days.

Urticaria appeared in thirty-two cases and was proportionate to the amount of antitoxin used. The average time of its appearance was nine days after the injection.

The occurrence of albuminuria and paralysis was about the same in the two series. But the authors think that, if the cases were treated with antitoxin early enough, these conditions would be greatly diminished in frequency and severity.

The authors have not found that the bacilli disappear from the throat any sooner when antitoxin is used than when it is not. Their clinical and bacteriological observations do not lead them to assign any great importance to the other organisms present in diphtheria.

At the end of the paper Dr. S. Jamieson gives an abstract report of the *post-mortem* examination of eight children who died of diphtheria after antitoxin was used,

A. B. Kelly.

Hektorn, Ludvig. *Diphtheria and Mixed Infection in Typhoid Fever. Report of Two Fatal Cases.* "Medicine," April, 1896.

THROAT complications in typhoid fever are quite frequent, and a number of cases of diphtheria occurring during typhoid have been reported. In the autopsy made of the two fatal cases, one showed a membrane of the larynx and cesophagus from which Loefler's bacillus could be cultivated. No cultures could be made in either case from the blood or organs of the body, or from the air passages.

Oscar Dodd.

Kanthack, A. A., and Stephens, J. W.—*A New and Easy Method of Preparing Serum Agar-Agar. An Aid to the Diagnosis of Diphtheria.* "Lancet," March 28, 1896.

A METHOD of using such albuminous exudations as ascitic, pleuritic, and hydrocele fluids, which are always to be obtained in any large hospital, and can be used with advantage instead of serum. Several advantages are claimed for it as a nutrient medium for diphtheria bacilli.

Stclair Thomson.

Kelly, J. E. — *Septicæmia following Diphtheria; Treatment by Streptococcus Antitoxin; Recovery.* "New York Med. Journ.," Feb. 22, 1896.

THE patient was attacked with septic infection of a severe type, with cervical adenitis—the temperature never rising over 100 Fahr., however. He was given twelve injections of Gibier's streptococcus antitoxin in seventeen days, and after five the temperature fell; after six the pulse; and after seven the respiration. The reaction after the first injection was most marked.

R. Lake.

Kortwright, J. L.—*Practical Experience with Antitoxin.* "Brooklyn Med. Journ.," Feb., 1896.

THE value of this drug, according to the author, needs no further demonstration, the mortality in New York having fallen from twenty-eight to eighteen per cent., and in Brooklyn from thirty-five to twenty-four per cent. With regard to practical details, he finds, by experiments on rabbits, that injection of a few air-bubbles into veins gives rise to no symptoms. Serum injected into veins may cause liberation of hæmoglobin, with adhesion of corpuscles in masses sufficient to produce capillary blocking, as well as extensive coagulation. The antitoxin is coagulated by antiseptics remaining in the syringe; and embolism may thus occur if injection is made into veins. Eruptions—scarlatinaform, mortilliform, erythematous (urticarial or hæmorrhagic)—all occur in as many as sixteen per cent. Urticaria usually appears after eight days. Inflammation of joints occurs, and more particularly in those cases in which Klebs-Loefler bacillus is *not* found.

Kortwright, J. L.—*A Case of Septicæmia is Reported occurring in a Child Injected for Immunity.* "Brooklyn Med. Journ.," Feb., 1896.

THREE anomalous fatal cases are described. In a healthy girl of sixteen, injection, quite early in the disease, was followed within five minutes by convulsions, cyanosis, and cessation of breathing. During artificial respiration the heart's action ceased. *Post mortem*: no embolism was to be found, though the needle was proved to have transixed a small vein. Death may have been due to embolism in the respiratory centre, or to the presence of some poison in the serum, none of which remained for subsequent examination. The author recommends that the possibility of the presence of a poison should be excluded by trial on a cat before treatment is commenced. Two other cases of rapid fatal sequel to injection are quoted.

Murdock, E. P. (Chicago).—*The Recent Epidemic of Diphtheria in Chicago. Results of the Serum Antitoxin Treatment.* "Med. News," Feb. 22, 1896.

THE author first refers to the precautions taken against the spread of the disease, and points out that the results obtained by the antitoxin treatment compare most favourably with any hitherto noted. He classes them as follows :

RESULTS OF ANTITOXIN TREATMENT IN 805 CASES OF TRUE DIPHTHERIA
(BACTERIALLY VERIFIED).

Treated.	Total.	Recovered.	Died.	Death Rate.
First day of disease	61	61	0	0'00 per cent.
Second ,, ,,	187	184	3	1'60 ,,
Third ,, ,,	372	362	10	2'68 ,,
Fourth ,, ,,	109	92	17	15'60 ,,
Later than fourth day	76	54	22	28'94 ,,
	805	753	52	

Total number of children and others exposed to the disease and treated with the protective dose of antitoxin 810
Total number of these who subsequently contracted diphtheria 4
St George Reid.

Nolan, H. R. (Toowoomba, Q.).—*Diphtheria in a Child treated by Injections of Antitoxin.* "Australasian Med. Gaz.," Feb. 20, 1896.

REPORT of a severe case successfully treated by antitoxin. A. B. Kelly.

Ricci.—*Upon the Good Results Obtained by Intubation in Conjunction with Serum Injections in Croup.* "Riforma Med.," 1896, No. 22.

DISCOURAGED by the frequent fatal complications following intubation, the author, as early as 1893, had merely resorted to it as a preparatory measure to subsequent tracheotomy. However, after the introduction of the serum treatment the cases requiring operation became rare, and in these intubation fully answered the purpose. In ten cases thus treated nine recovered; the fatal case occurring in an infant of ten months, and was complicated with measles. Jefferson Bettman.

Shurly, B. R. (Detroit).—*Antidiphtheritic Serum and Loeffler's Solution; with a Report of Twenty-six Cases.* "Therap. Gazette," Feb. 15, 1896.

DETAILS of all the cases are given, and the following points are noted in conclusion. The diagnosis was verified in every case; cases were not selected; no case died treated within two days of invasion; no deleterious effects were observed; tracheotomy was demanded four times, and all recovered. There were only two deaths, one case being moribund on admission. Middlemass Hunt.

Thomas.—*Diphtheritic Hemiplegia.* "American Journ. of Med. Sciences," April, 1896.

THE author quotes details of twenty-nine cases of diphtheritic hemiplegia which occurred in the practice of various observers, and two cases which he himself observed. Both his cases were due to vascular disturbance of the internal capsule—one of the right and the other of the left hemisphere. Permanent paresis and muscular spasm existed, so that nerve structure must have been destroyed and secondary degeneration have ensued.

In one case aphasia, lasting nearly two months, occurred with *left* hemiplegia, and this loss of speech was thought to be due not merely to palatal paresis, but

to real motor aphasia, because regurgitation of fluids came on previously without loss of speech.

Of all the cases cited, hæmorrhage probably occurred in seven and embolism in ten. In all the others diagnosis was doubtful. *Barclay J. Baron.*

Thomas.—*Streptococcis—General Infection. Infection: Suppurative Median Otitis—Death.* "Rev. de Laryng.," Oct. 1, 1895.

A CASE is recorded in detail, of which the author regards the following points as interesting. The *début* was marked by general infection, manifested in painful enlargement of the right and left submaxillary glands; acute suppurative middle otitis on the third day, confirming the fourteenth conclusion of Blaxhall's communication read at the Congress of Lyons, 1894—namely, that in young infants (especially when there is otitic suppuration) moans and cries on movement, on raising it, laying down or rocking, or whenever the head is not upright, ought to make us think of painful stiffness of the muscular masses which move the head, and cause us to examine the ears. When otorrhœa is already recognized these crises point to an extension of the disease, and announce meningeal complications, even before epileptiform convulsions, delirium, and coma. If there is dysphagia, we must think of the possibility of a retropharyngeal abscess, consecutive to the aural region. The aural pus was found to contain streptococci and staphylococci, the former being most abundant. The illness began with slight left tonsillitis, purulent discharge from the left ear, enlargement of submaxillary and cervical glands, polymorphous scarlatinal erythema, diphtheritic stools, stomatitis and abscesses of the gums, submental phlegmon, and retropharyngeal abscess. The infant (only eighteen months of age) showed a remarkable resistance in resisting for forty-one days such an extensive infection. *R. Norris Wolfenden.*

Wood. G. E. C.—*Method for Rapidly Producing Diphtheria Antitoxins.* "Lancet," April 11, 1896.

DESCRIPTION of a method by which powerful antitoxins can be produced without risk in a much shorter period of time than has been previously possible. Hence the amount necessary to be injected into a patient can be greatly reduced, and the greater strength of the serum will permit of a patient receiving at the beginning of treatment a sufficient quantity of the serum at one injection, when, as is universally recognized both by animal experiments and clinical experience, its curative action is exerted most markedly. *StClair Thomson.*

MOUTH AND PHARYNX.

Arslan (Padua).—*Tumours of the Tonsils.* "Bollet. delle Mal. dell' Orecchi, etc.," April, 1896.

THE author, prior to describing four cases of his own, surveys the entire literature on this subject, and collects, in all, one hundred and ten cases of tumours of the tonsils. In these, syphilomata, and, secondly, sarcoma, preponderate in number. The sex is specified in but fifty-five of the recorded cases, and of these thirty-five are males. The abuse of tobacco and alcohol seems to predispose to the development of malignant tumours of the tonsils. Age seems to assert a certain influence, the majority of the cases occurring between the fortieth and sixtieth year;

but a few cases have been observed prior to the twentieth year. Microscopic examination is, as yet, the only certain means of establishing a correct diagnosis of the type and nature of the tumour. The author describes *in extenso* the four cases of tumours that came under his observation: the first, an enormous angiosarcoma involving the right tonsil; the second, a case of carcinoma of the left tonsil; the third, angioma of the right tonsil; and, last, papilloma of the right tonsil. Subjoined, the author gives the entire modern bibliography on the subject.

Jefferson Bettman.

Beausoleil.—*Acute Inflammation of the Lingual Tonsil.* "Rev. de Laryng.," Dec. 1, 1895.

THIS is most frequently met with in people who have more or less hypertrophy of this structure. The onset is sudden, with cephalalgia, shivering, fever, pain on deglutition, often localized below the seat of the lesion, sometimes at the sternal fourchette or radiating towards the ears. This pain is almost pathognomic; if there is abscess there may also be oedema of the epiglottis. The laryngoscopic mirror must be used, as simple inspection of the throat will often reveal the tonsils and neighbouring parts to be normal, or nearly so. The lingual tonsil is covered with white exudation, and very painful to touch; the disease lasts between six and ten days, and ends in suppuration. Abscesses must be opened, and subsequently the hypertrophied tissue may be reduced by iodine applications, with trichloracetic acid, or with resorcin. If these do not suffice the galvano-cautery knife will be necessary.

R. Norris Wolfenden.

Chappell, W. F.—*Three Cases of Xerostoma, or Dry Mouth.* "New York Med. Journ.," Feb. 29, 1896.

1. **PATIENT**, aged forty, complained of dryness of nose, eyes, mouth, and respiratory tract. The attacks were temporary, and had been present, off and on, for eight years. Four years later frequency of micturition set in, and the parotid glands commenced to enlarge; though not usually tender, they were liable to sudden and painful swellings. The dryness extended to the mouth, tongue, pharynx, and larynx. Her teeth had all decayed. The mucosa and conjunctiva were dry, and the former atrophic. She died ten months after her first visit, from paralysis.

Cases 2 and 3 are similar, the latter having a history of sudden onset caused by a nervous shock.

R. Lake.

Ficano.—*A Case of Angina of Ludwig.* "Atti delle R. Accad. delle Scienze Med.," 1895.

THE author treats, in general, of the history, symptomatology, and treatment of this affection, and adds a case that lately came under his observation. It occurred in a priest, aged fifty-two, who, refusing to submit himself to any surgical interference, suddenly succumbed five days after the onset of the disease. No autopsy having been performed, it is difficult to arrive at the exact cause of death. However, in all probability, owing to a forcible act of defecation, the abscess ruptured, the pus penetrated into the respiratory tract, producing asphyxia. In conclusion, the author dwells upon the necessity of early surgical interference as the only means of saving the patient.

Jefferson Bettman.

Ficano.—*Tertiary Syphilitic Follicular Pharyngitis.* "Gazz. degli Ospedali e delle Clin.," 1895, No. 10.

OWING to difficulty in diagnosis, the author maintains that this affection is often confounded with scrofulous angina, malignant ulcerative angina of Fougère, ulcerative scrofulous sore throat of Bazin, etc. He agrees with Bosworth, that many of these

so-called scrofulous affections are of syphilitic origin, and are best treated with mercurial remedies. The author then describes five cases, and dwells upon the differential diagnosis between this affection and tubercular ulcerations, lupus, and epithelioma of pharynx. Pathologically, the condition presents two phases—one of infiltration, the other ulceration. Specific treatment is most efficacious.

Jefferson Bettman.

Fournier (Paris).—*Syphilitic Infection of and by Medical Men.* "Med. Age," March 10, 1896.

THE above contains some points of interest to the laryngologist. A case is recorded of a medical man who contracted syphilis through a patient expectorating in his face while an application to the throat was being made. Instances are also given of infection carried by tongue depressors, Eustachian catheters, and pencils of nitrate of silver. The use of the last mentioned is now forbidden in the French hospital service.

Middlemass Hunt.

Gouguenheim and Ripault.—*Contribution to the Study of Benign Tumours of the Arch of the Palate.* "Ann. des Mal. de l'Oreille," Jan., 1896.

THE authors relate in detail a case of myxo-sarcoma of the superior face of the arch of the palate, occurring in a patient forty-four years of age, and operated on by Bosworth's snare. There was no subsequent recurrence.

R. Norris Wolfenden.

Morrow, W. S. *Parotitis in Pelvic Disease.* "Montreal Med. Journ.," March, 1896.

THE author relates three cases of parotitis—one associated with pelvic peritonitis, two with cessation of menstruation due to the catching of chill during the period. He reviews Stephen Paget's work, and adduces arguments in favour of the reflex nervous origin of these cases.

Ernest Waggett.

Riesman, David (Philadelphia).—*Xerostomia (Dry Mouth); with the Report of a Case.* "Philadelphia Polyclinic," March 7, 1896.

THIS disease, due to the suppression of the salivary secretion, was described by Jonathan Hutchinson some years ago. The author gives the notes of some of the cases which have been published. The particulars of the case which came under his observation were as follows:—The patient, a woman, aged thirty-eight, complained of frontal and occipital headache, constipation, and abdominal cramps, with a dry, pasty feeling in the mouth and throat and a burning pain in the tongue. There was also a burning sensation along the course of the inferior maxillary nerve. On examination the tongue was red, bare, and beefy, studded with petechial hemorrhages on the under surface. Treatment failed to give any relief.

St George Reid.

Rosenberg.—*Some Remarks on Pharyngeal Tuberculosis.* "Rev. de Laryng.," Nov. 15, 1895.

THE author has found this condition in twenty-two cases out of twenty-two thousand patients seen at his polyclinic—forty times less frequently than laryngeal tuberculosis. It is more frequent in the male than female sex (sixteen to six). He does not agree with Volkmann's observation that it occurs seldom except in young people, having found it occur six times between thirty-five and forty, and four times between forty and forty-six. It is most frequent in the poorer classes. It does not appear to be hereditary. Infection is nearly always secondary.

The author has only seen it three times primary in the pharynx. Diffuse infiltration of the mucous membrane is rarer than tubercles, discrete or confluent, or ulcerations. The tonsils are oftener the original point of development than is generally admitted, as is proved by Strassmann's and Domochowski's observations. The base of the tongue, though apparently unaffected, is often found to be so microscopically. The same applies to the adenoid tissue generally in the nasal pharynx. The process is generally arrested clearly at the oesophagus.

The miliary form is generally more common in the pharynx than diffuse tuberculosis. Tubercular tumours are scarcely ever met with in the pharynx. While the process is cured spontaneously sometimes in the larynx with the formation of adhesions, this never occurs in the pharynx, in spite of the assertion of Volkmann that cicatricial retractions of the pharynx and certain naso-pharyngeal stenoses are more commonly due to tuberculosis than syphilis. The author devotes some space to consideration of the diagnosis, the only real difficulty being occasionally a differentiation from lupus, especially when the latter occurs without skin affection. As to treatment, while the disease is almost universally rapidly fatal, the author cites the case of a young woman who was cured after repeated cauterizations of the superficial ulcerations of the anterior pillars with chromic acid. The author knows no better treatment than curettage and cauterization combined with hygienic treatment and local sedatives.

R. Norris Wolfenden.

Wade, Sir Willoughby.—*Remarks on Tonsillitis as a Factor in Rheumatic Fever.* "Brit. Med. Journ.," April 4, 1896.

THE arguments embodied in this important article require to be read in full. The main conclusion arrived at is the strong probability that "there is a special rheumatic bacillus, or bacilli"; and, further, that this special bacillus may or may not be associated with those of tonsillitis. A point of practical interest is established by the fact that in many cases of rheumatic fever said to follow a cured tonsillitis after some interval of time, the throat is found to be in a catarrhal condition, and the author urges the necessity of antiseptic treatment of the throat in all cases of rheumatism where there is the slightest local trouble.

Ernest Waggett.

NOSE AND NASO-PHARYNX, &c.

Belfanti and Della Vedova.—*Upon the Etiology and Cure of Ozæna.* "Gazz. Med. di Torino," April 2, 1896.

IN a paper read before the Royal Medical Society of Turin the authors claim that ozæna is caused by an attenuated type of diphtheria bacillus, and not by the bacillus mucosus ozænæ. To render their views practicable they instituted the antidiphtheritic serum treatment, and in half the cases produced the disappearance of the fætor, turgescence of the mucous membrane, and a fluid consistency of the nasal secretion. However, many injections, in one case repeated thirty times, are necessary. In the discussion which followed, Prof. Bozzolo claimed to have produced benefit in two cases thus treated. Prof. Gradenigo adopted the treatment in fourteen cases, however, without any appreciable benefit.

Jefferson Bettman.

Didsbury.—*A Case of Pharyngeal Actinomycosis.* "Rev. de Laryng.," Oct. 15, 1895.

A GIRL of fifteen presented white patches on the tonsils, springing from the crypts, and they occurred also on the posterior pharyngeal wall. Microscopically they

were found to consist of leptothrix. They reappeared after removal by o-cels and iodine dressing, but were sensibly diminished when the patient smoked one cigarette daily.

R. Norris Wolfenden.

Freudenthal, W.—*Rhinoscleroma*. "New York Med. Journ.," Feb. 1, 1896.

THE history of this disease is traced from its first recognition by Helsa in 1870 to the present time, and is a complete monograph. A very full account of a case is given, with illustrations. The patient, a Galician Jew, forty-five years of age, was first attacked twelve to thirteen years ago. His present condition is, briefly: The nose is of immense size, the right side presenting a tumour the size of a hen's egg; it is bluish red or dark red, with a smooth surface, with a few vessels coursing over it; it is of ivory-like hardness. There is a separate nodule in the upper lip. The right inferior turbinate bone is involved in its whole extent, completely occluding the nose by forcing the septum across to the right. The pharynx is a mass of scar tissue, the uvula destroyed, the naso-pharynx almost shut off. The glottis is almost, if not entirely, occluded, and respiration is performed by means of a tracheotomy tube. The characteristic bacillus was found and cultivated.

R. Lake.

Page.—*Bacteriological Diagnosis of Ozena*. "Rev. de Laryng.," Oct. 1, 1895.

IN the author's preparations of ozenous mucus he has found along with Loewenberg's microbe some isolated cocci, bacteria of the bacillary type, staphylococci, and rarely streptococci. The great predominance of diplococci is very marked. The cocco-bacillus of ozena is not localized; it is also found in the nasal pharynx, conjunctival sac, and even trachea. It is very virulent, inoculated animals dying quickly, and may be experimentally attenuated. The discovery of Loewenberg's cocco-bacillus, according to the author, gives the key to diagnosis of ozena and infections of the neighbouring tracts.

R. Norris Wolfenden.

Gradenigo.—*On Serumtherapy in Ozena*. "Archiv. Ital. di Otol.," 1896, Vol. IV., fasc. 2.

THE author has treated sixteen cases of ozena with the antidiphtheritic serum. Five of them were diagnosed bacteriologically by Belfanti. He cannot pronounce a positive opinion, as, although all the cases were improved, not one was cured. This he ascribes to the insufficiency of the dosage employed. He confirms the specific elective action of the serum on the diseased nasal mucous membrane.

StClair Thomson.

Graham, G. W.—*A Tooth Growing in the Nose*. "Charlotte Med. Journ.," Feb., 1896.

A GIRL, eight years of age, ran against the projecting hinge of a gate and knocked out one of her front teeth. The mouth healed minus the tooth, which could not be found. For eighteen months after the accident she suffered from one-sided nasal discharge and obstruction. On examining the nose the missing tooth was found embedded in the inferior turbinated bone, where it had taken root and was growing vigorously, having been driven right through the superior maxilla.

Middlemass Hunt.

Quaife, W. F. (Sydney, Q.)—*Further Notes upon Adenoid Hypertrophies*. "Australasian Med. Gaz.," Feb. 29, 1896.

THE author refers to the failures due to the want of discrimination in operating in these cases; also to the improper manner in which the operation is performed, and the disregard of pathological factors. This state of things is to be overcome only by securing a more thorough understanding of the causes producing the hyper-

trophy in the beginning, and the impediments preventing the full benefit being reaped after the operation.

The pathology of adenoid hypertrophy is carefully considered. Having referred to the development of the tonsillar structures, and traced the course of the lymphatic channels from the middle ear and pituitary membrane, the author shows how adenoid hyperplasia in the pharynx may result simply from the access of systemic irritants. The nature of the irritants is discussed, and the mode in which they set up a hyperplastic process in the various tonsils in children is indicated.

The frequent association of sclerotic otitis media in the parents with adenoid obstruction in the children is mentioned and explained. *A. B. Kelly.*

Renaud. — *Two Cases of Foreign Bodies in the Nose.* "Rev. de Laryng.," Oct. 15, 1895.

IN one case, a child of nine, symptoms resembling typhoid fever—epistaxis, constipation, cachexia, fever, and sacro-iliac gurgling—disappeared after discovery and removal of a button from the nose.

In the other case, ozæna, which remained incurable, was discovered to be due to a cherry-stone, which was at first thought to be a sequestrum. The case had been under treatment for seven years. *R. Norris Wolfenden.*

Scheppergrell, W.—*The Comparative Pathology of the Negro in Diseases of the Nose, Throat, and Ear from an Analysis of 11,853 Cases.* "Annals of Oph. and Otol.," 1895.

THE two races suffer from diseases of these organs in varying proportion—that of naso-pharyngeal catarrh, in fact, being 12 negroes to 100 whites; in chronic suppurative and non-suppurative catarrh of the ear, 15 and 26 to 100 respectively; rhinitis, 25 to 100; deviation of septum, 10 to 100, and so on. It is probable that the broad and patulous nostrils of the negroes are more efficient protectors of the nose than those of the whites—this explaining also the more frequent disease of the ear and throat in the latter. *R. Lake.*

Seifert. — *A Supernumerary Tooth in the Nose.* "Rev. de Laryng.," Nov. 1, 1895.

A MAN of twenty-five had the right nostril completely impermeable to a catheter. Two centimètres from the entrance, and on the floor of the fossa, was a hard white substance partially embedded in granulation tissue. After removal of these by a snare the foreign body could be pushed towards the choana and extracted. This was recognized as a tooth, incrustated with calcareous salts. The patient's teeth were well formed, and presented no anomaly. In this case, as in that of Daac, there must have been an invagination of the nasal mucosa in the nose with a dentary germ. Teeth have rarely been found in the maxillary sinus, migrating into the nose, or provoking empyema. The author reviews the cases recorded. The first case of supernumerary teeth in the nose recorded was that of Schaeffer ("Deutsche Med. Woch.," 1883). Ingals, Kayser, Daac, and Schoetz have recorded cases. *R. Norris Wolfenden*

Somers, L. S.—*Separation of the Nasal Cartilages.* "New York Med. Journ" Feb. 15, 1896.

THE patient was struck on the nose in 1886 with a shovel, and the bones broken, and on September 20th, 1895, he received another injury to the nose, in which the anterior cartilages were separated from the nasal bones. Good union was obtained. *R. Lake.*

Spivak, C. D. (Philadelphia).—*Nasal Affections as Factors in Chronic Gastritis.* "Philadelphia Polyclinic," March 7, 1896.

THE author draws attention to the probability of pathogenic changes in the nasal mucous membrane being the exciting cause of gastric disturbance in some cases, and strongly recommends more attention being paid to the condition of the nasal passages in obstinate cases of chronic gastritis.

St George Reid.

LARYNX AND TRACHEA.

Lack, H. L.—*Tracheotomy and its After-Treatment.* "Clin. Journ.," Feb. 5, 1896.

AN excellent clinical lecture, in which the author discusses the indications for tracheotomy and the details of its performance and after-treatment, both in acute and chronic laryngeal obstruction. An interesting case is recorded where a malingering simulated laryngeal stridor, "and submitted cheerfully to tracheotomy without an anæsthetic," before the true nature of the case was discovered.

Middlemass Hunt.

Lacoarret.—*Diffuse Subglottic Papilloma; Extirpation by the Endo-Laryngeal Method.* "Rev. de Laryng.," Jan. 4, 1896.

THE author relates in detail a case treated in this manner and makes some remarks upon treatment. He thinks that endo-laryngeal treatment should always be employed where possible, laryngotomy being only a last resource. In children under seven years of age endo-laryngeal methods are extremely difficult; where they fail and symptoms are urgent tracheotomy may be performed, and endo-laryngeal methods practised at leisure. After tracheotomy, the growths may disappear spontaneously or be expelled. In other cases, as the child becomes more intelligent, extirpation may be made by the mouth—if necessary under chloroform. In a few cases where this is not successful, or where the tumours are subglottic, numerous, or inaccessible, laryngotomy may be a last resort. The author recommends the usual cutting forceps, and, in cases of diffuse small growths, scraping and cauterization.

R. Norris Wolfenden.

Lichtwitz.—*Traumatic Longitudinal Division of the Right Vocal Cord, caused by a Foreign Body with Cutting Edges.* "Ann. des Mal. de l'Oreille," Jan., 1896.

A CHILD, five years of age, playing with a leaden toy, got it into the larynx. Tracheotomy, being urgent, was performed forty-eight hours after. Twenty days after unsuccessful attempts were made to remove the foreign body, which could be felt by the forefinger behind the epiglottis. A week afterwards the body could be neither felt nor seen, but was, however, still there. Thyrotomy was performed and the foreign body easily removed. The canula was removed some time after, but respiration remained difficult. This was found to be due to the presence of a whitish band, thinner in front than behind, which was attached from the anterior internal third of the left vocal cord to the middle of the interarytenoid region. A new thyrotomy was performed by Prof. Demons. The author found the band still there after the operation, and a third cric-thyrotomy was then performed. When the larynx was opened examination under strong light failed to reveal this band. The introduction of a curved probe beneath the left vocal cord allowed the author to raise and surround a fine vertical riband, consisting of a portion of the

cord itself (which, however, was only discovered afterwards—histologically), which resembled a cicatricial formation and was resected at its two points of insertion. Respiration became free; but phonation was worse than previously, requiring much effort to emit a sound. The foreign body had, therefore, torn a portion of the right vocal cord throughout its whole extent, as well as a portion of the mucous membrane comprised between the right vocal apophysis and the interarytenoid region.

R. Norris Wolfenden.

Sendziak. — *Rheumatic Inflammation of the Crico-Arytenoid Articulations.*

"Archiv. Ital. di Otol.," 1896, Vol. IV., fasc. 2.

RECORD of a case in which the joints mentioned were first affected, causing serious symptoms of pain, dysphagia, aphonia, high fever, and prostration, followed by affections of the larger joints. This affection is rare, and in the present case the diagnosis had to be made from simple inflammation, tubercular laryngitis, and influenza.

St Clair Thomson.

Trifiletti, A. — *Experimental Researches on the Physiological Pathology of the Inferior Laryngeal Nerves.* "Archiv. Ital. di Laringol.," 1895, fasc. 3.

THESE experiments tend to show the different results obtained according to whether the animal is or is not anaesthetized; and also according to the intensity and quality of the electric stimuli. The conclusions are as follows:—

1. The recurrent laryngeals in animals (dogs) submitted to the ordinary conditions of electric experiment (anaesthesia, etc., and, above all, the use of electric currents that are neither feeble nor slowly interrupted), behave as nerves of motion. When the entire trunk is stimulated, or its peripheral extremity after section, there is produced first a slight and then a decided movement of the corresponding cord, or of both the cords, to the middle line. When, however, the stimulus is applied to the central extremity of the cut nerve, there is no movement of the cords; and the cord corresponding to the one cut continues to remain in the cadaveric position (paralysis).

2. The recurrent nerves also behave as nerves of motion, and show the influence of the cords already noted when the electric stimulus is applied either to the entire or divided nerve immediately after the death of the animal in the chloroform narcosis.

3. In these conditions the branch of the superior laryngeal nerve which supplies the crico-thyroid muscle is also shown to be a nerve of motion.

4. When the animal is not submitted to the ordinary conditions of electric experiment (*i.e.*, without anaesthesia, and more particularly with currents of variable intensity and slow rhythm), the recurrent laryngeals react in a different manner—
(a) when the entire nerve or its central extremity is stimulated there is abduction, accompanied by a forced inspiration, followed by an immediate and noisy expiration;
(b) when the peripheral extremity is stimulated we have tonic adduction.

5. When the animal is not perfectly anaesthetized and submitted to currents of variable intensity and rhythm, stimulation of the recurrents gives results which participate in those indicated under paragraphs 1 and 4.

6. In order to explain the apparent contradiction between groups 2 and 3 and the results obtained in group 1, it would seem well to admit there are fibres with reflex action (Krause and Burkart) in recurrent laryngeals, their action in the ordinary conditions of experimentation being masked or prevented by the anaesthesia of the animal: but it is much more reasonable to explain the new phenomena obtained as simply an *experimental result* connected with the intensity and rhythm of the electric currents used as stimuli, exactly as in the last experimental results of F. Hooper, etc.

7. In order to examine directly the laryngeal cavity and the movements of the cords, it would seem advisable to adopt the method of operation employed—*i.e.*, incision of the integuments as far as the deep aponeurosis in the middle line of the neck; detachment of the sterno-hyoid and thyro-hyoid muscles; transverse section of the thyro-hyoid membrane and incision of the lateral glosso-epiglottic ligaments; finally, hooking and pulling out the epiglottis by the opening made.

A good bibliography is added.

StClair Thomson.

Palliative Measures to be Employed in the Dysphagia of Laryngeal Tuberculosis

"Arch. Int. Laryng., Otol., Rhin.," Jan., 1896.

AN editorial note recommending the following :—

Chloro-hydrate of cocaine	25 centigrammes.
.. .. morphine	10 ..
Antipyrin	2 grammes.
Eau distill. de laurier cerise.....	} aa 50 ..
Boiled water	

"Three or four dessertspoonfuls to be used in the twenty-four hours in the form of a spray."

More efficacious is the following insufflation, the anaesthetic effects of which are established in forty-five minutes, and often persist for many hours, and even all day :—

Chloro-hydrate of morphine.....	2 centigrammes.
Milk sugar	} aa 4 ..
Gum arabic	

The larynx must first be cleared of mucus with an alkaline spray (Vichy water).

Ernest Wazgett.

THYROID, NECK, &c.

Berry, J.—*Thyroid Cysts and Adenomata.* "Lancet," March 21, 1896; and "Transaction of the Pathological Society," Vol. XLVII.

THE main object of the communication was to show the manner in which certain common and important thyroid cysts were formed—namely, from solid adenomatous nodules, by the gradual breaking down of the centre of the nodule. Many of the cysts removed by the operation of enucleation could be shown, if properly prepared by hardening in alcohol, to be in reality adenomata. Specimens were shown to illustrate all stages of transition between the early solid adenomata without any cyst to the almost completely cystic tumour, in which mere traces of gland tissue, adhering to the inner surface of the cyst wall, were all that remained of the original solid adenoma. It was pointed out that cysts formed in this manner were particularly well suited for enucleation, since the cyst wall was usually thick and only loosely embedded in the surrounding thyroid gland tissue.

StClair Thomson.

Latter, Dr.—*Surgery of Glands in the Neck.* Folkestone Medical Society. "Brit. Med. Journ.," March 14, 1896.

OF acute conditions requiring intervention, the adenitis of scarlet fever, coming on during early convalescence, was the most common. Enucleation might be performed or suppuration awaited. With regard to tubercular glands, their removal was indicated by (1) extensive implication of glands (with or without definite suppuration); (2) failure to subside after medical treatment; (3) progressive deterioration of general health.

The incisions should be made, as far as possible, to leave a scar under the shadow of the jaw, the ear, or the sterno-mastoid.

In all cases of enlarged glands or intractable fistula an attempt at cure should be made by fixing the neck in a cervical splint.

Ernest Waggett.

McKie, Norman.—*Thymus Treatment of Exophthalmic Goitre.* "Brit. Med. Journ.," March 14, 1896.

A CASE of three years' standing in a schoolmistress of twenty-nine, with a pulse never under ninety to the minute, and with very marked exophthalmos. One to three five-grain tabloids of thymus were administered daily, with relief of the exophthalmos and return to good health. On cessation of treatment the symptoms returned in a few weeks; the tabloids were recommenced, and in spite of unfavourable circumstances the symptoms were in "a short time" again relieved. There was no noticeable change in the thyroid, which was at no time much enlarged.

Ernest Waggett.

Shattock, S. G.—*Exogenous Adenomata of the Thyroid Gland.* "Lancet," March 21, 1896; and "Transactions of the Pathological Society," Vol. XLVII.

SPECIMEN shown, of which the very unusual character consisted in the fact that the mass was a conglomeration of a large number of distinct growths loosely held together by connective tissue. Structurally they presented in part the character of normal thyroid tissue; but in part the gland spaces were distended with multiform epithelial cells, and the colloid occurred as collections of discrete droplets lying amid the cell masses. The multiplicity was explained as arising from an exogenous formation of adenomata.

StClair Thomson.

Taylor, F.—*Malignant Stricture of the Œsophagus, with Perforation of the Aorta.* "Lancet," April 11, 1896.

It is rare to find a carcinomatous ulceration of the Œsophagus perforating the walls of an artery of large size, and it is still more rare to find it perforating the aorta. Statistics show that it has happened only four times in 6886 cases, or a percentage of 0.058. The fatal termination does not seem in any case to have been brought about by the passing of bougies. In the case recorded the growth was situated at a distance of seven inches from the commencement of the Œsophagus; it had ulcerated through the coats of the aorta; the bronchial glands showed secondary deposits. The case was rapid in progress. The termination was, as usual, quite unforeseen. Any treatment is out of the question.

StClair Thomson.

Vinke, H. H. (St. Charles, Mo.).—*Sporadic Cretinism, with Report of a Case treated with Thyroid Extract.* "Med. News," March 21, 1896.

THE author refers to the rôle played by the thyroid gland in normal metabolism, and deals with the etiology of cretinism and the history of its treatment. He gives the notes of a case of a child, aged seven, where the symptoms were very marked, improvement was rapid under the thyroid treatment. In the first three months there was a decrease in weight amounting to twenty-four pounds, but there was an increase in height of four inches in five months. The dose was half a grain of thyroid extract three times daily.

StGeorge Reid.

Williams, J. T.—*Thyroid Cyst in a Child Eleven Months Old; Operation; Recovery.* "Brit. Med. Journ.," April 18, 1896.

THE cyst was first noticed at the age of four months, from which time it increased rapidly, and attained the size of a small chestnut. Latterly difficulty in swallowing was experienced, and occasional attacks of urgent dyspnoea occurred, possibly due to pressure on the recurrent. The cyst was removed with good results.

Ernest Waggett.

EARS.

Ackland, T. D., and Ballance, C. A.—*Cerebellar Abscess. Secondary to Ear Disease, illustrated by a Case successfully Treated by Operation, with Remarks on Diagnosis, and with a Table of Published Cases.* St. Thomas's Hospital Reports, Vol. XXIII., 1894.

THE patient, a boy fifteen years old, had suffered from right-sided otorrhœa since the age of six and a half. Five weeks previous to admission, on May 11th, 1894, he had suffered from severe vertical and frontal headache of sudden onset. The pain was constant, and he complained that his legs and feet gave way and he occasionally fell. Two weeks before admission he had to give up work, the headache becoming worse, and giddiness even when lying down now set in. The latter became so severe that he had to close his eyes to stop it. Four days before admission he noticed objects seemed to rotate from right to left, and he himself seemed to turn the opposite way. Vertigo now became extreme, as did the headache. Vomiting set in, and the eyes oscillated.

On admission. In addition to the above symptoms both eyes deviated to the left, and the right only moved to the mid-line when turning to the right, and horizontal nystagmus. The right membrana tympani was destroyed, and the watch was not heard on contact on that side. Obvious loss of power in right upper arm, slight loss of power in right leg. Right knee jerk more brisk than left. Pulse 56, temp. 96·2. No retraction of head. On May 11th (day of admission) an abscess was opened in the anterior part of the lateral lobe of the right side of the cerebellum. On the 12th the pulse rose to 84 and temperature to normal.

Symptoms, however, recurred. This was, however, due to blood clot in the posterior part of the lateral lobe, the removal of which was necessary again on May 30th. The boy returned to work on November 15th.

Thirty to forty per cent. of all brain abscesses are otitic. In twenty-six cases at St. Thomas's there were nine temporo-sphenoidal and nineteen cerebellar. At Great Ormond Street two temporo-sphenoidal and four cerebellar. The authors quote headache, vertigo, photophobia and purposeless vomiting, optic neuritis, low temperature, slow pulse and respiration, drowsiness, foul breath and constipation, loss of control of bladder, emaciation, pallor and loss of expression of countenance; and as localizing symptoms, *paresis of the anterior extremity on the same side as the cerebellar lesion, associated with weakness of the lower extremities, increased knee jerk on the same side as the lesion, and conjugate deviation of the eyes away from the lesion.* The various explanations of this hitherto offered are not deemed satisfactory. Muscular rigidity or convulsions may affect the limbs on the same side as the lesion. A tendency to rotation of the face to the side of the lesion in walking. Staggering or cerebellar gait, and a tendency to fall towards the side opposite the lesion. A tendency to lie coiled up in bed on the side opposite the lesion. No loss of sensation. The localizing symptoms of temporo-sphenoidal abscess are enumerated and discussed.

And the following points in differential diagnosis are pointed out:—(1) The patient tends to lie on the side of the lesion in temporo-sphenoidal lesion. (2) Frequent depression of lower jaw. (3) Tenderness on palpation is not necessarily that of abscess. (4) Differential percussion note is not reliable. (5) Disease of the bone in the attic or posterior fossa indicates the direction in which to search. (6) McBride's sign also not certain.

Diagnoses in complicated cases, and from tubercular meningitis, are discussed.

as is brain abscess, not of otitic origin, in a patient suffering from otitis. The treatment is carefully dealt with, and this classical article concludes with a synopsis of one hundred, and a table of seventy-nine cases, and a complete bibliography.

R. Lake.

Bevan, A. D.—*Mastoid Diseases*. "Journ. Amer. Med. Assoc.," April 11, 1896.

AFTER making a large number of operations on the cadaver, he lays down some landmarks in mastoid surgery. The simple anatomical fact must be kept in mind that the facial nerve lies in a plate of bone between the external auditory canal and an opening directly into the antrum. If this plate is chiselled away, as is recommended by some text-books, the nerve will certainly be injured.

Oscar Dodd.

Bezold, T. (Munich).—*A Further Case of Anchylosis of the Stapes Diagnosed in Life, with Autopsy and Manometric and Histological Examinations*. "Arch. of Otol.," Vol. XXV., No. 1.

THE patient, aged twenty-four, had been hard of hearing for seventeen years, with continuous tinnitus. There was a family tendency to deafness. The appearances of the membrane were insignificant. Whispered voice was heard in the right ear at six centimètres, and in the left at twenty-five centimètres. Fork A on the vertex was heard best in the left (better) ear. Rinné with A, both sides negative, and with A¹ shortened. The lower tone limit showed loss of hearing for tones below F—1. The diagnosis was sclerosis, with anchylosis of the stapes. Similar conditions were found in the patient's younger brother. The elder one died five years later, and on *post-mortem* examination the stapes were found to be completely immovable both to the probe and the manometer. On histological examination there was found to be a deposit of spongy bone around the pelvis ovalis of both ears. The cochlea and remainder of the labyrinth appeared to be normal. This is the fifth case in which a diagnosis of anchylosis of the stapes, founded upon lengthened bone-conduction for low tones, marked negative Rinné, and extensive defect for air conduction at the lower end of the scale, has been verified by *post-mortem* examination.

Dundas Grant.

Braislin, W. C. (Brooklyn). — *A Case of Living Larvæ in the Ear without Previous Suppuration*. "Arch. of Otol.," Vol. XXV., No. 1.

INSPECTION of the interior of the meatus revealed, in the midst of fragments of exfoliated epithelium, a small white object with curious "vibrio movements." The case was exceptional, inasmuch as there was no foetid pus to attract the parent insect to the ear. The patient, however, suffered from fetid atrophic rhinitis.

Dundas Grant.

Couetoux.—*Dressings in Chronic Purulent Median Otitis*. "Ann. des Mal. de l'Oreille," Oct., 1895.

ALCOHOL dressings have a clearly determined action, causing retraction of a swollen meatus, and favouring emptying of the tympanum when this is deprived of communication with the exterior. It is especially when there is this swelling of the meatus that it is so excellent. The author heats it to 95° above a lamp. When the liquid is quite hot, but supportable to the finger, it is carefully dropped into the ear. It is far superior to boracic acid. Though quite tolerable to the patient, if there is any pain this is dissipated by the application of heat to the external ear. It is equally beneficial in infants and old people. Boracic acid may be added to the alcohol and heated up with it until it commences to carbonize, and a dressing

may be dipped in it and passed through a flame (Lermoyez, Du Fougerey); or it may be applied not quite dry, when it is less antiseptic, and it is also colder, and external heat should be applied, or hot alcohol at 95° may be introduced. The country practitioner will find a small wad of fine linen wrapped round a knitting needle, soaked in brandy and burnt in a flame, a serviceable application for introduction into the ear.

R. Norris Wolfenden.

Courtade.—*Case of Occlusion of the Auditory Meatus: Operation.* "Ann. des Mal. de l'Oreille." Dec., 1895.

THE case of a child, five and a half years of age, who had suffered an injury to the right ear by forceps at birth, from which abscess resulted and closure of the meatus. Three operations at different periods failed to render the canal patent. In October, 1894, the author succeeded in restoring the meatus, which had ended in a *cul de sac* fifteen millimètres inside the tragus. The author describes his method of treatment of membranous occlusions, believing that simple dilatation is useless in most cases, except as a preliminary to surgical measures. When the adhesion is extensive he prefers the bistoury to the galvano-cautery. *R. Norris Wolfenden.*

Knapp, H. (New York).—*Further Observations on the Indications for Mastoid Operations in Acute Purulent Otitis Media and its Complications.* "Arch. of Otol." Vol. XXV., No. 1.

THE first case was one of acute purulent otitis media with mastoid involvement and glandular swelling. Temporary improvement took place under the use of the Leiter coil, but recurrence soon followed, with complete facial paralysis. On operation the antrum was found empty, but a probe passed through the tip into the digastric fossa. The internal jugular vein was exposed and the lateral sinus was injured, but the hæmorrhage was easily stopped, and rapid subsidence of the facial paralysis and of all the symptoms took place. The facial nerve was probably affected in the lowest part of its course, and the suppurative inflammation was particularly marked in the numerous air cells surrounding this.

In the second case there were marked cerebral symptoms, and the relief following paracentesis of the drum membrane was only slight and temporary. On recurrence of the symptoms, alleviation for a time followed the use of the cold coil, but operation had to be performed on the mastoid process, and much soft cancellous bone was found and removed with a sharp spoon. The bottom of the cavity felt quite soft: and although fluctuating improvement was effected for some days, nausea, vertigo, and chilliness set in, and further operation was undertaken for the exposure of the sigmoid sinus, it being concluded that some focus of suppuration had not yet been reached. The sinus was exposed to the extent of two centimètres and was found to pulsate normally. The wound in the bone was then enlarged upward and forward, so as to expose a small circle of dura mater at the base of the middle cranial fossa. No pus was found there; the dura mater was normal and pulsated regularly. For four days the patient improved, but the pain returned, with chilliness, nausea, and weakness; and the wound was again explored, and in every direction where the bone was soft, specially towards the tip of the mastoid process, where there was diminished resistance, towards the lower surface, curetting was thoroughly carried out. From this time the patient steadily improved. From this case Dr. Knapp draws the following rule for guidance—that "as long as there are grave and protracted symptoms of middle ear disease we have to seek for their anatomical cause, in doing which exploratory openings of the cranial cavity are legitimate, because they are practically harmless, and sometimes may save the patient's life."

Dundas Grant.

Laurens.—*Anæsthesia by Guaiacol Oil in Otology, Rhinology, and Laryngology.*

"Ann. des Mal. de l'Oreille," Jan., 1896.

THE solution is made by purifying olive oil with chloride of zinc, then washing with alcohol (to get rid of albumens, resins, and fatty acids), and maintaining for some time at 100 degrees. The solution to be used is twenty per cent. Two cubic centimètres used for the ear have been quite as efficient as cocaine. The application to the nose should be made by strong frictions and by a tampon. In fifteen to twenty minutes anæsthesia is produced. Possessing no astringent effect, it is not so good in the nose as cocaine. It has been useful in the pharynx. Both in the nose and throat the time necessary to obtain analgesia is much greater than with cocaine. In the ear this is less noticeable. It has also the disadvantage of forming a white emulsion with nasal secretions, which must be removed before operation.

R. Norris Wolfenden.

Luc.—*Contributions à l'étude des Mastoidites de Bezold.* "Arch. Inter. Laryng., Otol., et Rhinol.," Jan. and Feb., 1896.

THE author, after dealing with all the cases (nineteen in number) of this complication hitherto recorded, proceeds to describe a twentieth example. The patient, a man of sixty-six, came complaining of abundant suppuration in the right ear of two and a half months' duration. There was swelling of the right side of the neck, which, according to the patient's account, had extended secondarily to the retro-auricular region. The author considered the cervical swelling to be due to simple extension of œdema. The original cause of the otitis was found in ulcerating gummata of the naso-pharynx. Antisyphilitics were prescribed, and without delay the mastoid antrum was opened in the usual manner. The cavity was found to reach almost to the point of the mastoid. One of the assistants noticed during the process of packing that pus seemed to continue to flow from the lower part of the antrum.

Three days after operation the cervical swelling had increased in size, causing manifest prominence of the sterno-mastoid, and the least pressure over the swelling produced a gush of pus from the bottom of the antrum. The wound was necrotic in parts, and analysis of the urine proved the patient to be diabetic. The author now recognized the case to be one of Bezold's mastoiditis, and on examination found a perforation on the inner wall of the apophysis in the situation of the digastric groove, through which pus had made its way down under the sterno-mastoid and along the sheath of the great vessels. A second operation was immediately undertaken, and the whole of the apophysis was resected with the gouge and Major's cutting forceps. In order to obtain drainage by a counter-opening, the author, having failed to pass a probe from above downwards as guide, dissected down on to the sheath of the vessels, at a point four centimètres below the angle of the jaw. The sheath, which was of a yellowish colour, was opened, with immediate escape of pus. A drain tube was carried up along the sheath to the upper wound, and the whole was packed. The patient, a diabetic as stated, died on the fourth day.

The author, after drawing attention to the causes of error in his own case, gives a general essay of the most interesting and important character, and of which the main points only are dealt with here.

The peculiar etiological element essential for the production of this rare complication is pronounced development of the mastoid cells which closely approach the internal surface of the apophysis. The accident is consequently never observed in children, while a notable proportion of recorded cases are among those past fifty, in whom rarefaction has probably played a part. Suppuration localized in the cells may give rise to the complication, which appears in nearly all cases to be

part of acute or sub-acute disease. Pus, having penetrated the internal wall and reached the digastric groove, may either pass backwards under the sterno-mastoid, and eventually reach the muscles of the neck, and even the cervical vertebrae, or it may travel downwards and forwards in the sheath of the vessels, and ultimately present as a lateral pharyngeal abscess. Although the condition complicates acute or sub-acute mastoid disease, its effects are essentially slow and insidious.

The otorrhoea of many weeks' standing may indeed have ceased, or no otorrhoea may have occurred at all; the patient complains of slight pain, not accompanied with fever, and a fulness is noticed behind the angle of the jaw; the upper part of the sterno-mastoid becomes raised by an underlying, firm, non-fluctuating swelling, limited above by the base of the skull. Pressure on this swelling may or may not produce a flow of pus from the ear or the open mastoid. Later, fluctuation is to be detected behind or in front of the sterno-mastoid, or in the pharynx. In no case has pus reached the mediastinum. The swelling may be mistaken for an adenitis or simple oedema. Non-perforation of the external wall of the mastoid is an aid to diagnosis, but the pathognomonic sign is the flowing of pus from the bottom of the opened mastoid antrum on pressure being applied over the cervical swelling.

The complication, particularly on account of its insidious course, must be considered a serious one, and intracranial suppuration is not rare, owing no doubt to the difficulty of discharge into the deep structures of the neck.

With regard to operation, the author is of opinion that in view of the difficulty of obtaining free access to the upper end of the cervical abscess, it will be well in all cases to resect the whole of the apophysis which projects below the base of the skull: a proceeding which is free from difficulty if the sterno-mastoid is first thoroughly detached. A counter-opening should be made at the most dependent point by dissection from without, and not through the pharynx, where asepsis is impossible. No appreciable impairment of the function of the sterno-mastoid muscle need be feared.

Ernest Waggett.

Schwager (Kaiserslautern).—*A Case of Objective (Perceptible) Noise in the Ear.* "Monats. für Ohrenheilk.," Feb., 1896.

THIS was a peculiar clicking sound, which could be heard about as far as twenty centimètres from the patient's left ear. It was irregular in rhythm, and its frequency was about one hundred and twenty to the minute. Isochronously with the noise the soft palate and uvula rose and fell, and the patient could by an effort check the noise and reproduce it. It was obviously a case of clonic spasm of the tensor palati muscle, through the action of which the walls of the tube were detached from each other. The condition came on about four years previously, after an accident which led to her lying unconscious with her head in a brook for some time.

Dundas Grant.

Urban, Pritchard (London).—*The Treatment of Polypi and Granulations.* "Arch. of Otol.," Vol. XXV., No. 1.

THE ear is disinfected by syringing with 1 in 40 warm solution of carbolic acid for three or four days. On the morning of the operation the auricle and cartilaginous meatus are purified with a 1 in 20 solution of carbolic acid; the deeper meatus and middle ear are syringed with the 1 in 40 solution, followed by an instillation of the same strength, or of 1 in 20 if the ear will tolerate it. After ten minutes or a quarter of an hour the drops are allowed to run out, the cartilaginous meatus is lightly plugged, and the auricle is covered with double cyanide gauze, wrung out in 1 in 20 carbolic acid. All anti-septic precautions as regards instruments, fingers, etc., are attended to, the blood and débris are syringed out

with 1 in 40 carbolic acid after the operation, and a light plug of double cyanide gauze is inserted, after being wrung out in a 1 in 40 carbolic solution. Finally a dressing and bandage are applied. Very few changes of dressing are required, and the author points out that in these highly septic cases mere aseptic treatment is valueless.

Dundas Grant.

Urquhart, R. A. (Baltimore).—*Two Cases of Abscess in the Mastoid Region, associated with Diabetes Mellitus.* "Med. News," March 21, 1896.

THE author draws attention to the fact that inflammation of the mastoid is very frequent in diabetes mellitus. The first case mentioned is one of a female, aged fifty-seven, in fairly good condition, who had suffered from diabetes for seven years, following an eruption of boils in the face, pain was complained of in the right ear. On examination the membrana tympani was seen to be congested and the external meatus swollen, especially along its posterior wall; this was rapidly followed by purulent discharge from an existing perforation in the posterior inferior quadrant, accompanied by great tenderness over the mastoid. The case yielded to boric lotion and hot applications. In the second case the patient, also a female, aged sixty-seven, was poorly nourished, the mastoid was primarily affected, the inflammatory process developing slowly but steadily; pain was experienced on deep pressure only. The membrana tympani never showed more than a mild congestion. On incision through the periosteum the bone appeared to be unhealthy and the periosteum was diseased. The author remarks that possibly, judging by the long period of the purulent discharge kept up, there was something more than a simple perioritis.

StGeorge Reid.

Von Stein (St. Petersburg).—*On the Disturbances of Equilibrium in Diseases of the Ear.* "Arch. of Otol.," Vol. XXV., No. 1.

THE writer agrees with Goltz and Brenner that in the labyrinth there is a special anatomical apparatus which by reflex action serves to maintain equilibrium—namely, during motion the semicircular canals (dynamic), and during rest the utricle and saccule (static).

The subjects were tested, as regards their static muscular energy—

1. By standing with the legs approximated and the knees stiff.
2. Standing partly on the toes and partly on the soles of the feet, with the legs close together.

3. Standing on one foot alone.

4. Standing on a descending plane with closed legs and stiff knees.

As regards the dynamic muscular energy—

1. Walking straight on a level floor forward or backward.

2. Jumping.

3. Hopping on one leg.

4. Rotation on the vertical axis of the body to the right or left with the legs close together.

5. Rotation on one leg.

By comparing the behaviour of normal subjects and of those with diseased ears he came to the conclusion that static disturbances suggest affections of the utricle and saccule; dynamic (with nystagmus), disease of the ampullar system. From prognostic point of view he formed the opinion that the more severe the disturbances of equilibrium were in a peripheral disease of the ear, with simultaneous loss of hearing, the less hope there was of restoration. He describes several typical cases, and draws attention to the medico-legal importance of these observations, the serious disturbance of equilibrium being an element

of importance in judging of claims for damages in cases of railway or other injuries. *Dundas Grant.*

Walker, Downie (Glasgow).—*A Case of Acquired Total Deafness, the result of Inherited Syphilis, with Post-Mortem.* "Arch. of Otol." Vol. XXV., No. 1.

A TYPICAL case as regards personal and family history and functional examination. The base of the stapes was incorporated with, or ossified to, the border of the foramen ovale. The mastoid bone was solid. The outer part of the internal auditory meatus was much narrowed, and at its outermost part almost completely obliterated, as was also the vestibule. In the cochlea the modiolus and lamina spiralis ossa were unusually thickened, and of the semicircular canals only a trace of the external one could be found. *Dundas Grant.*

Wilkin, G. C.—*Aural Polypi: their Symptoms, Diagnosis, and Treatment.* "Clin. Journ.," March 25, 1896.

THE author speaks favourably of parenchymatous injections of pyoktanin in malignant aural polypi, which he has employed in two cases. *Middlemass Hunt.*

MOLL'S TREATMENT OF ACUTE DISEASES OF THE ACCESSORY CAVITIES OF THE NOSE BY RESPIRATORY ASPIRATION.

Contributed by Dr. DUNDAS GRANT.

IN the proceedings of the last annual assembly of the Dutch Society of Laryngology, Rhinology, and Otology, Dr. Moll, of Arnheim, contributed a description of a new simple and apparently very successful method of relieving, and even curing, the affections above described. In a few words, it consists in aspiration of the contents of these cavities by means of a forcible inspiration while the nose and mouth are firmly closed. In this way no air can be drawn into the chest, and there is a considerable lowering of pressure on the contents of these cavities. The fluid in them is thus drawn out to a greater or less extent, as was proved in Dr. Moll's cases by the appearance of pus in the nasal cavities, although it had been completely removed before the carrying out of the method. Furthermore, in a case in which an alveolar puncture had been already made, a manometer indicated a fall to the extent of fifteen millimètres of mercury during the forced inspiration. In a very illustrative case the patient carried out the process every two hours. She obtained immediate relief from the characteristic discomfort, and in a few days was perfectly well. In the last few lines of the abstract of his communication the interesting secret emerges that he was in his own person a sufferer from this affection. Necessity was possibly the mother of invention, and the relief which he himself experienced has doubtless been the cause of his discovering a method which certainly appeals to common sense, and which recommends itself on account of its simplicity.

THE NEW RHINOLOGY.

UNDER the title of "A Humorous Séance" the *Scalpel* (March, 1896) gives the account of a meeting of the Medical Society of the Twenty-ninth Arrondissement, Paris. Amongst the communications presented was "An essay by Dr. Ducornet, the eminent rhinologist, on 'The difference of arterial pression in each of the two nasal fossæ, right and left, with operatory deductions.' In his conclusions the author insists, with much reason, on the facts already partially recognized—that rhinology is a field far too vast for the activity of a single specialist; that it is, therefore, necessary to divide its specialization; and that in future the illuminants of this branch of medical science should be known as *right* rhinologists and *left* rhinologists, the *septum nasi* alone being common ground for the two, though they should, as far as possible, endeavour to confine their interventions each to his own surface of that formation, even in cases where it may be considerably deflected to one or other side."

A. B. Kelly.

THE TWELFTH INTERNATIONAL CONGRESS OF MEDICINE, MOSCOW.

7th (19th) to 14th (26th) August, 1897.

ABSTRACTS FROM THE REGULATIONS.

4. Those persons who desire to take part in the Congress should forward twenty-five francs for their card of membership. This gives the right to take part in all the work of the Congress, and to all the publications—as, for example, "The Report of the Congress"—as soon as they are published.

5. When forwarding their subscription to the treasurer of the Congress, members should state fully and legibly their name, address, and profession. Their visiting card should be sent also.

7. Section XII.A. Otology. XII.B. Laryngology and Rhinology.

19. The time allowed for each communication shall not exceed twenty minutes for each speaker, and for those who take part in the discussions five minutes.

20. French is recognized as the official language for Congress in all international relations. In the general assembly all European languages are permitted.

For either communications or debate in the sections, either French, German, English, or Russian.

24. The presidents of the sections will reply to sectional questions. Other questions and communications should be addressed to the secretary-general of the Congress.

N.B.—All laryngologists and otologists are requested to send their addresses to Dr. A. Belayeff, secretary of the section.

THIRD INTERNATIONAL CONGRESS OF DERMATOLOGY.

THE Third International Congress of Dermatology will be held in London, this year, from August 4th to 8th inclusive. The meetings will take place in the Examination Hall of the Royal College of Physicians and Surgeons, on the Victoria Embankment. Separate sections will be established for dermatology and syphilis, the meetings of these being held simultaneously.

The scientific portion of the programme is practically complete, and the large number of British as well as foreign physicians who have testified their intention of being present ensures the success of the Congress, of which Mr. Jonathan Hutchinson is president.

The fee for membership, which entitles to the volume of "Transactions" to be issued, is £1, payable to the hon. treasurer, Mr. Malcolm Morris, 8, Harley Street, London, W.

The secretary-general, to whom all communications may be addressed, is Dr. J. J. Pringle, 23, Lower Seymour Street, London, W.

NEW PREPARATIONS.

COMPOUND CAFFEINE TABLOIDS (Burroughs, Wellcome, & Co.,
Snow Hill Buildings, London).

All our English readers are so well acquainted with the excellence of this firm's productions that in the following examples we shall surmise that to be admitted. The blending of antipyrine, grs. iij., and caffeine, gr. i., has done much to remove the objections, both fanciful and real, to the former. The proportion of the latter would be needlessly high if it were to effect this only, but it distinctly aids the physiological action of antipyrine, especially in regard to the rapidity of its action. We have noticed this particularly in reflex headache.

SOLOIDS OF CARBOLIC ACID. TABLOIDS OF COMPRESSED OXALATE OF
CERIUM, CITRATE OF LITHIA, AND BITARTARATE OF LITHIA.

They are old friends with new faces. The soloids are most valuable, each containing five minims of pure acid. Oxalate of cerium in this form is easily disposed of by the patient, and probably better retained. The two last preparations effervesce in the mouth, and will prove of undoubted utility in gouty states of the pharynx, by acting locally first. The acid tartarate is also said to have less disagreeable effects, and is a drug which seems to have advantages over the citrate, being more tolerated by the stomach.

LITMUS PENCIL (Thos. Christy & Co., 25, Lime Street, E.C.). 1s. 3d.

We have seldom seen a more useful addition to the consulting-room or the doctor's bag. Litmus paper is prepared by simply rubbing a piece of paper with the pencil, red or blue as required. Its moderate price is also greatly in its favour.

BOOKS. ETC., RECEIVED.

Handbuch der Laryngologie und Rhinologie. Dr. Paul Heyman. 1 Lieferung. Wien, 1896: Alfred Holder.

Eine Neue Transplantation: Methode für die Radikal Operation bei Chronischen Eiterungen des Mittelohres. By Stabarzt Dr. Passow. Berlin, 1895: H. Hirschwald, N. W. Unter den Linden, 68.

Essentials of Diseases of the Eye. E. Jackson.—*Diseases of the Nose and Throat.* E. B. Gleason.—*Kimpton's Students' Essentials.* 1896. H. Kimpton, 82, High Holborn, London. 4s.

Revue internationale d'Electrothérapie. An sixième, Nos. 7 and 8. G. Gautier and J. Lard, 3, Place du Théâtre-Française, Paris.

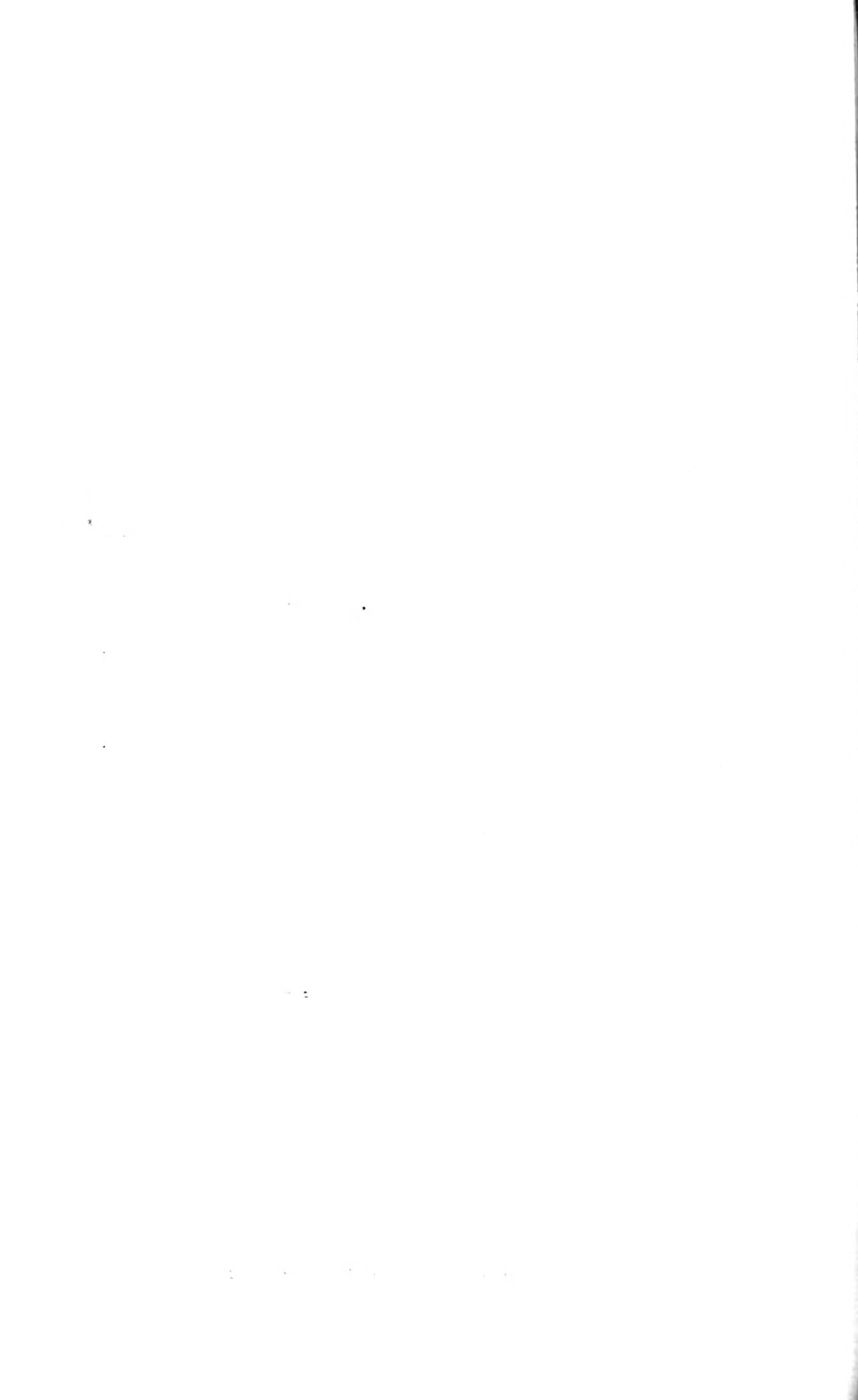
The Medical Counsellor. Medical Counsellor Publishing Club, Detroit.

Cooper Medical College (San Francisco) Annual Announcement. 1896.

Journal of Eye, Ear, and Throat Disease. Vol. I., No. 1, April, 1896. F. M. Chisolm, M.D., and J. R. Winslow, M.D., Editors. Baltimore.

NOTICE TO SUBSCRIBERS.

THE Editors have made arrangements by which binding covers can be obtained of the Publisher (11, Adam Street, W.C.). The covers are roan backs and gold lettering, for the sum of 1s. 6d. By this means uniformity in binding would be obtained. The first cover, Vol. X., January to June, inclusive, 1896, will be obtainable the first week in July.



THE JOURNAL OF LARYNGOLOGY, RHINOLOGY, AND OTOTOLOGY.

Original Articles are accepted by the Editors of this Journal on the condition that they have not previously been published elsewhere.

Twenty-five reprints are allowed each author. If more are required it is requested that this be stated when the article is first forwarded to this Journal. Such extra reprints will be charged to the author.

The Editors are not responsible for opinions expressed in original Articles or Abstracts in this Journal.

Editorial Communications are to be addressed to "Editors of JOURNAL OF LARYNGOLOGY, care of Rebman Publishing Company, Limited, 11, Adam Street, Strand, London, W.C."

SCHOOL BOARDS AND DIPHTHERIA.

By R. NORRIS WOLFENDEN, M.D. (Cantab.).

THE report just presented to the School Board of London by its medical officer "on the prevalence of diphtheria in London and elsewhere, and its alleged connection with the elementary schools,"¹ formulates conclusions which are so opposed to current opinion that it merits close attention. The chief interest of the report centres round the question whether the aggregation of children in schools is or is not an important factor in the incidence and spread of the disease. Dr. Smith's conclusions are somewhat startling, viz., "that school influence, as such, plays but an unimportant part in the enormous increase of the disease during recent years in London"; and this he supports by the results of special inquiry into 2168 consecutive cases, a very small number of which, according to him, "could be traced to even a possibility of school infection."

The author claims the system of inquiry he adopted—viz., requiring the nurse removing the case to fill up a form, and the head teacher of the school, where the child was of school age, to do the same, along with inquiries from the parents of the children, and personal visits during the school holidays—to be accurate; and also that the number of cases inquired into (2168), being unprecedentedly large, excluded any source of error, the cases (having arisen both during school and holiday periods) being also typically representative. If the author's assumption as to the extreme accuracy of this method of investigation may be open to criticism, his conclusions undoubtedly are still more so. He finds that the disease is equally incident in children attending upon schools and in those not attending; and that as the cases of school age attributable to school

¹ Report to the School Board of London, April, 1896. By Dr. W. R. Smith. Published by Straker & Sons, London.

infection form only 7·6 per cent. of the cases, while 15·4 per cent. can be traced to other causes, school influence is but a small factor in the spread of the disease. According to his figures, only 124 cases out of the whole—*i.e.*, 5·7 per cent.—may fairly be attributable to school influence. The author's inquiry embraces the periods from April 1st to September 30th, 1895. It will, perhaps, be interesting to give an abstract of the author's report in as much detail as we can allow. First, dealing with statistics from 1855-1895, he shows that the mortality from diphtheria in England and Wales has steadily increased since 1881, but this has been most marked in the London area. This enormous increase is well shown in the table giving the mortality per million for the decades :—

	England and Wales.	London.
1861-70	185	176
1871-80	121	122
1881-90	103	260
1891-95	252	543

He then refers to Mr. Shirley Murphy's report to the London County Council of March 8th, 1894, and his address to the Epidemiological Society in November, 1894, in which he suggests that further investigation into the question of school influence is required; and to Mr. Murphy's deductions that the increase of mortality at ages from 3 to 10 first became conspicuous in 1871, after the passing of the Elementary Education Act, and this marked increase in populous districts as compared with rural districts since 1871 may be due to the greater effect of the Education Act in the former. He incidentally mentions Dr. Low's, Dr. Wheaton's, Dr. Sweeting's, and Dr. Sykes's reports upon outbreaks.

He next discusses the general evidence from mortality of diphtheria in England and Wales, and deduces from his statistics that, while for the whole country diphtheria mortality has been high in recent years, it is not so high as it was a generation ago. The first School Board decade, 1871-80, was followed by a decreased mortality, shared by nearly the whole country. The increase of mortality of periods 1881-90 and 1891-95 was very considerably greater in the southern than northern parts of the country. Surrey, Sussex, Kent, and Essex have been the most prominent.

Since 1861 up to 1880 London has been increasingly encircled by a ring of diphtheria counties, and in the two periods following mortality in London increased enormously. The southern counties have suffered most since 1881; the midland and northern counties (except Leicester, Lancashire, and Durham) suffered theirs before 1871. The southern area includes agricultural counties which cannot be constantly infected direct from London. And the northern area of low diphtheritic rates since 1871 comprises dense populations, in which all the influences of mere aggregation in the spread of the disease are likely to be as active as in London, and far more active than in agricultural districts (Bucks, Wilts, Oxon, Suffolk), whose rates now exceed those of any of the four periods in Lancashire.

In Essex, Dr. Thresh's reports show that there has been a marked increase of mortality from diphtheria in rural as well as urban districts, and, if school influence is a factor, Dr. Smith asks why should Ongar, a

purely rural district, have greatly increased incidence, while Colchester has only slight increase?

The author proceeds to compare diphtheria and measles, emphasizing what is known, that the two behave very differently—those counties and districts which suffer most from scarlet fever and measles not being most favourable to the diffusion of diphtheria.

After having "shown that the theory of school influence is inadequate to explain the incidence of diphtheria through the country in the last quarter of a century," the author proceeds to consider in detail the case of London.

He criticises Mr. Shirley Murphy's proposition that at ages three to ten diphtheria mortality was maintained in the decennium 1871-80, being most notable in London, and suggesting a fresh factor as regards diphtheria at ages three to ten becoming operative in the decennium 1871-80 (*i.e.*, School Boards). Dr. Smith objects to taking age three as that at which school attendance begins, and prefers age four. During the recrudescence of the disease in 1881-90 children aged two to three were most affected by the rise, while in London the incidence fell a year earlier, the increase was much less at age four (at which school life practically begins), and was still less after five, when attendance is compulsory. Apparently a fresh factor in 1881-90 affected children under school age more than those who were exposed to all the risks of school infection. Dr. Smith says that the age period five to ten may be taken as representing school age, and any explanation of the incidence of diphtheria in London must deal with the fact that at this age girls are one-third more liable to die of diphtheria than boys. The extra source of infection is to be found outside the schools, *viz.* less open air than boys and the habit of kissing.

Dr. Smith asserts that stronger evidence than his statistics could hardly be adduced that age susceptibility is the main factor in the selection of diphtheria victims, and that "school aggregation acts only as a slightly disturbing element." A child becomes more liable to diphtheria year by year as it approaches school age, and less liable to it year by year after it has reached school age. We cannot quote these statistics *in extenso*, but their compiler concludes from them that it is impossible to resist the conclusion that no special increase of liability to diphtheria can be traced to the beginning of school attendance. The ages now most subject to the disease would still be the same if aggregation in schools were abolished, and the steady liability up to four and diminution commencing at four to five would continue.

Table XXV. is intended to show that the period of greatest mortality to diphtheria begins *before* the real school age has begun, and those districts in which the special liability commences at one or two years of age show that the conditions of home life "are a much more potent factor in the spread of the disease than aggregation in schools." Dr. Smith deals with the contention that holiday periods have occurred simultaneously with a decrease in the notifications, indicating that school influence is a main factor in determining the spread of the disease.

So far as the figures in Table XXVII. go—

Notifications at each Age for the Four Weeks before, during, and after the Holidays in August, 1895.

0	1	2	3	4	5	6	7	8	9	10	11	12	13-15	15 and upwards.
33	66	82	116	119	103	81	65	54	43	34	29	30	48	228
18	59	59	74	71	57	62	39	30	32	31	19	13	35	201
25	50	73	114	100	85	92	71	46	39	44	23	24	40	233

they not only lend no support to Dr. Smith's contention, but rather prove the very opposite, viz., that there is a distinct decrease in the number of notifications during the holiday period, and a very marked increase in the notifications before and after the reassembling of the schools. The figures taken from provincial towns are, as Dr. Smith remarks, too small to enable too many conclusions to be drawn from them. There is some force in his contention that a decrease in the notifications during school holidays may be largely due to many children being removed into the country, leaving fewer susceptible people in London.

While admiring the industry of the author, as evidenced by this report, and the enterprise of the School Board in forwarding the inquiry, we can only remark that Dr. Smith has not advanced the question much further. The question of the influence of schools and aggregation of children in the spread of this disease is but little nearer solution than it was before, and must still remain an open one. Some of Dr. Smith's facts and figures do not always seem to us to bear the inferences he has drawn from them, and we feel convinced that this report will do but little towards removing the general impression that aggregation of children in schools leads to the spread of diphtheria, though we willingly admit that he has made out as good a case as is possible from a partial inquiry, for the School Board. But it leaves the question much as it was before, and a good many factors must be taken into consideration before we can agree with such sweeping conclusions. While many of these conclusions are open to adverse criticism, we can more cordially agree with Dr. Smith in his recommendations that all children with sore throat should be excluded from school, and intimation be given to the Medical Officer of Health; and that means of bacteriological examination should be placed at the disposal of the sanitary officials, and notification of cases within twelve hours be given to the head teacher, to ensure the removal of children from infected houses.

Turning now to the report of Dr. Shirley Murphy,¹ we find the following remarks upon "Diphtheria and Elementary Schools":—"In my last report I discussed the relation of school attendance to an increased incidence of death from diphtheria in the school-age period of life since the Elementary Education Act came into force, and I stated my reasons for thinking that the aggregation of children in schools played an important part in the dissemination of diphtheria in London. It may be recollected that the notification statistics of the year 1893 showed that when school operations were suspended by the summer holidays there was a notable diminution in the prevalence of diphtheria at

¹ "Annual Report of the Medical Officer of Health of the Administrative County of London." 1894. London: Stanford. May, 1895.

"all ages," and especially among children at the school-age period of life, and that a marked increase followed the reassembling of children at the conclusion of the holidays. With a view to learning whether the experience of 1894 affords similar evidence the cases of diphtheria in that year have been cast into weeks, and grouped into three periods of four weeks, corresponding with the four weeks immediately before the effect of the summer holidays would be manifested, the four weeks during which this effect would be manifested, and the four subsequent weeks."

	Notified Cases.			Increase or Decrease per cent.		
	0-3	3-13	13 and upwards.	0-3	3-13	13 and upwards.
The four weeks preceding effect of holiday	136	476	125	—	—	—
The four weeks during which the effect of the holiday would be manifested.....	151	362	203	- 11'0	- 23'9	+ 4'1
The four subsequent weeks	135	503	225	- 10'6	- 44'5	- 10'8

The number of attacks among children under three years of age was decreased in the third period of four weeks, and the August depression in the curve showing attacks in children at this age occurs somewhat later than the depression in the curve showing attacks in children from three to thirteen, suggesting that the attacks in children at the earlier age are due to infection from children of older age, and that the diminution in attacks in the former was due to diminished opportunities of infection from the latter. This was also the case in 1893, and the year 1894 "teaches the same lesson as the preceding year, so that the attention of medical officers of health and of school authorities should be especially directed to a study of the conditions required to lessen as far as possible the opportunity which school attendance affords for the communication of this disease from one child to another."

Speaking at a meeting of the Epidemiological Society on May 15th, Dr. Shirley Murphy reiterated his opinion that aggregation of children in schools was the greatest factor in the spread of diphtheria.

We feel strongly that the opinions advanced by this authority are more in accord with general experience than the deductions of Dr. Smith, whose investigations appear to us to be far from complete and to have added very little to the elucidation of a very complicated question. The subject is one of vast importance, concerning, as it does, the multitudes of children under the control of the School Board, as well as in its general bearing upon the question of the etiology of this disease.

Dr. Smith's endeavour to whitewash the School Board of London in this particular matter appears to us to be too much of the nature of making out the best possible case for his employers; and while giving every credit to an investigation which must have entailed both labour and expense, we are not prepared to acquit the School Board on this evidence of serious defects, both as to the spread of diphtheria in the metropolis and as to other matters into which it is not necessary to enter here.

SOCIETIES' MEETINGS.

TRANSACTIONS OF THE AMERICAN LARYNGOLOGICAL ASSOCIATION.

Eighteenth Annual Congress, held at Pittsburgh, Pa., May 14th to 16th, 1896.

President. DR. WILLIAM H. DALY (Pittsburgh).

Special Report for the JOURNAL OF LARYNGOLOGY. By JAMES E. NEWCOMB, M.D. (New York). Fellow of the Association.

First Day, May 14th.—Morning Session.

PRESIDENT'S ADDRESS (*Abstract*).

Gentlemen and Fellows of the Association,—The replete programme now before us, comprising as it does thirty-four scientific papers, not including the theses of the candidates for membership, assures us that it is quite possible for us to have for our organization a congress of the first class in a city of the second class. The programme has never been equalled in the history of our illustrious society.

I am scarcely old enough to indulge in much looking backward, but I cannot refrain from doing so just a little, and with much pardonable pride, when contemplating the value our specialty has been and still is to the general practice of medicine and surgery, as also the value of our literature to that of the general science of medicine and art of surgery, and the eagerness with which the latter is sought after and studied by the profession.

There is to me the highest sense of pleasure in knowing the respect which laryngology now receives from medical men, as well as from the laity, and that our teachings have stood the crucial test of time and of practical experience, and have proved so great an aid to general medical science and practice.

There are so many robust men and women in this city to-day of whom I had the professional charge in former years as puny, chicken-breasted specimens of childhood, with nasal obstructions, adenoid growths, and chronic tonsillitis, that I have thought it not amiss to advert to the real and permanent benefits derived from treatment for their removal, the results in every instance of which are so worthy of our best admiration.

I was accosted a few days ago by a stalwart young man, who smilingly told me that he was one who was placed under my care twenty years ago, as a delicate boy, who weighed but sixty pounds when fourteen years old. He told me that he had nearly doubled his weight in the two years succeeding his treatment, which consisted of the clearing out, and curing of

the adenoids in his upper pharynx and the curing of a chronic tonsillitis. He is now a leading amateur athlete.

The debt that general medicine and surgical science and art owe to laryngology and rhinology, then, is so apparent and real that we may be pardoned for our expression of honest pride for the part this learned and pioneer society has taken to place and maintain it on the high plane it now occupies. Let us, then, go forward in the right direction, and especially endeavour to further reveal the obscurities that still surround ethmoid and sphenoid disease.

Before closing let me voice a sentiment that all of us so earnestly feel, and that is—all honour to Manuel Garcia, one of the fathers of the laryngoscope and of laryngology. Many of us sat with him last August in London around the banquet table of the laryngological section of the British Medical Association, and observed with pleasure how lightly and blithely his ninety odd years sat upon his silvered head, "frosty but kindly." And now, with bowed heads and sorrowing hearts, we also feel all honour to the name of dear Dr. Wilhelm Meyer, of Copenhagen, whose death, after ripe years, full of honours and loving regard by his profession, we justly mourn. Shall we ever forget his fatherly wisdom and kindness to us? Now that all Christendom is uniting to erect a monument to his memory, let us at this meeting, one and all, give with a liberal hand, thus showing in a practical way what everyone has so honestly felt in his heart.

Now, dear friends and Fellows, I bid you a hearty welcome to our city, and declare this Congress open.

The Etiology of Deviations, Spurs, and Ridges of the Nasal Septum.

JOHN O. ROE, M.D. (Rochester, N.Y.).

Deflections of the nasal septum are ascribed to a variety of causes. These may be divided into predisposing and exciting causes.

The two main predisposing causes are diathesis and racial characteristics. The principal diathetic influences are strumous, syphilitic, tubercular, and rachitic diatheses. The influence of racial characteristics is shown by the greater prevalence of deviated septa among civilized than among savage races, and in the aquiline type of nose.

The exciting causes of septal deflections may be internal or external. Internal exciting causes: (*a*) defective development; (*b*) diseases of the septum; (*c*) diseases of other portions of the nose.

In discussing defective development the author pointed out the fact that the frequency of the deflections from this cause was due to the fact that in early life the vomer is composed of two laminæ, which are separated by a plate of fibro-cartilage, which is prolonged forward to form the cartilaginous portion of the septum. Ossification begins in each plate about the sixth or eighth week of fœtal life, but is not complete until after puberty. The coalescence of the laminæ takes place from behind forward, beginning about the third year. Bearing in mind this fact that the vomer is composed of two parallel laminæ which do not fully coalesce until after puberty, and in some cases do not coalesce at all, we can readily see the effect that would be occasioned by the slightest imperfect development of either of these plates. Hypernutrition on one

side, or lack of development on the other, would cause the septum to be pushed out of its normal line of growth, and deflections in the vomer would naturally result and would be accentuated in the cartilaginous portion of the septum.

The fact that the laminae of the vomer coalesce from behind forward explains why it is that the posterior end of the septum is rarely observed to be deflected, while the middle and anterior portions are so frequently deviated.

The different forms which deflections, spurs, and ridges of the septum may assume is in this manner readily explained. This unequal development may take place in a vertical direction or in a horizontal direction. Thus, if we have a vertical overgrowth of the septum on one side or a defective growth of the septum on the other, we may have simple deflection of the septum toward the side of the greater development. Again, if we have an overgrowth of one plate in an antero-posterior direction and in another plate in a vertical direction, we may have the peculiar conformation of the septum called sigmoid deflection.

This unequal growth of the two plates composing the septum may be influenced by diseases of the septum itself. The redundant tissue resulting from hypernutrition of either side in excess of the other causes a vertical as well as a horizontal overgrowth, and as the septum lies between fixed limits an increase in that direction must result in its being bent to one side or the other, and spurs, ridges, and other excrescences of the septum are frequently caused thereby.

Associated with diseases of other portions of the nose we frequently have malformation of the superior maxilla, small and highly arched hard palate, and enlargement of one or more of the turbinated bodies on the concave side of the nose. The latter, however, is unquestionably more frequently the result of the deviation than the cause. Obstruction of the anterior portion of one of the nasal passages may cause deviation of the septum to that side by the continued rarefaction of the air in that nostril.

Of the external exciting causes the main one is traumatism, causing enchondromata, overgrowths, and dislocation of the triangular cartilage, thereby causing deflection of the septum as well as obstruction of one or both nostrils. Various other minor conditions to which deflections of the septum are ascribed by different authors were referred to, such as the habit of inserting the finger into one nostril to remove scabs and crusts, and habitually blowing the nose with the same hand.

Of the different causes that may produce deflection of the septum, the unequal development of the two separate plates of bone composing the vomer in childhood and early youth described by the author, and the influence of malnutrition in the causation of this unequal development, was regarded by the author as the most frequent and important condition in the production of ridges, spurs, and deflections of the nasal septum.

The Operation for Deviation of the Nasal Septum. DR. ARTHUR W. WATSON (Philadelphia).

Many of the usual operative measures are unsatisfactory because they overlook the fact that a deviated septum is longer than a straight one,

and make no provision for a reduction in the amount of tissue present. We must first reduce the septum to a size which will fit into a straight line between the points of attachment of that part of the nose. This is done by the removal of a portion of tissue in the general line of deviation. If the latter is horizontal we must excise an elliptical portion gradually convergent at both ends; if vertical, a wedge-shaped piece must be removed, its apex being above and its base lying near that of the septum, where, if necessary, it may be joined by a horizontal incision. The excised portion should always include the protruding angle, and the amount of tissue to be removed can be estimated by the eye. Care must be taken to avoid cutting the mucous membrane of the sound side opposite the incision, as it helps to hold the edges in line, thus facilitating union and avoiding perforation. Incision must be made on the convex side of the septum. To bring the portion operated upon into line, some variety of crushing forceps may be necessary.

Of no less importance is the second step of the operation, namely, the retention of the septum in position. This is often neglected, and bad results ensue. Healing of the cartilage requires from three to four weeks. The best support is furnished by a flat ring-head pin, the latter being encased in rubber tubing. The pin should enter from the concave side of the septum, just back of its anterior edge and passed diagonally through to its other side, then across the vertical incision, if there is one, and then back again into the septum, until the head of the pin lies on the latter within the nostril. We must avoid deflection in the opposite direction. In this way both nares are left free for breathing and for cleansing. Padding of the pinhead with the rubber prevents ulceration, and the pin may be worn even for three weeks without any discomfort.

Should additional support be required for a deviated bony septum, we may insert a pad of iodoform gauze between the septum and outer nasal wall at the point of deviation, but the bony parts heal more quickly than the cartilaginous, and the gauze may be removed, therefore, in from seven to ten days, the pin being still left *in situ*.

Requisites also for success are suitable illumination and freedom of the parts from blood. Cocaine anæsthesia is preferable to ether.

Discussion was opened by Dr. E. FLETCHER INGALS of Chicago. He thought that nutritive changes were by far the most frequent exciting cause. Trauma was greatly over-estimated. Indian children are as rough in their sports as white children, and must be frequently hit on the nose, yet they did not suffer from nasal catarrh.

Dr. MORRIS J. ASCH (New York) would agree with Dr. Ingals as to the rarity of trauma as an exciting cause. It did not operate in more than one out of fifty cases. He referred to his own operation for straightening, which he had presented to the Association in 1889. It might sometimes leave the nose a little rough inside, but it was freely pervious to air.

Dr. S. O. VAN DER POEL (New York) thought a *sine quâ non* in all these operations was the thorough overcoming of resiliency. He had been accustomed to pass a pin through the deflected point, but its pressure had caused pain and even ulceration at the juncture of the two incisions, sometimes even producing perforation. Later he had tried

breaking up the parts with Adams forceps, but even then the bad effects of pressure were the same as before.

Dr. CARL LEILER (Philadelphia) regarded the Asch operation as a revival of the one brought forward by Glasgow some years before, and afterwards advocated by Sajous in a modified form. The essential feature was the use of a stellate punch. A pin placed at the bottom of the septum obviates pressure in the latter. The pin should be introduced through the outside of the nose just below the notch in the nasal bones, thrust down to the cleft between the palatal processes of the superior maxillæ and its point firmly driven in there. It should not be cut off flush with the skin on the outside, but a sufficient length should be left to prevent a burial in the swelling of the soft tissues. After the latter had subsided a portion of the projecting pin could then be cut off.

Dr. J. E. H. NICHOLS (New York) laid stress upon the necessity of breaking up all resiliency. The Asch operation was good for cartilaginous operations. When the bony septum was involved he was accustomed to make a compound fracture thereof and apply a broad cork splint. He did not believe in the use of pins unless all resiliency was destroyed.

Dr. D. BRYSON DELLAVAN (New York) had discarded pins several years ago. Whether the idea of the Asch operation is entirely new or not, Dr. Asch had elaborated a practical technique, and for this we all ought to be grateful. As to etiology, he could not admit that trauma acted in all cases. Mouth breathing from any cause, and especially from adenoids, will produce lack of nasal development and consequent septal deviation.

Dr. W. E. CASSELBERRY (Chicago) expressed a strong belief in heredity as a factor in deviation. No one operation would suffice for all cases. Account must be taken of the age of the patient and of the anæsthetic to be used. Deviations were generally cartilaginous, with more or less encroachment upon the bony septum. As retaining measures he had been accustomed to use gauze and tubular splints.

Dr. JOHN N. MACKENZIE said he rose to do a dead man historical justice, for the essential features of the customary septal operations had been long ago suggested by the late Dr. James Bolton, of Bridgetown, Virginia. The speaker was accustomed to employ a vulcanite shell in the nostril operated on as a retaining splint.

Dr. W. K. SIMPSON (New York) had been impressed with the success of the Asch operation. He considered it bad surgery in these cases to plug the nose with gauze after operation. The Asch tubes would cause the hemorrhage to cease as soon as they were placed in position.

Dr. C. M. SHIELDS (Richmond, Virginia) was accustomed to saw off the thickened portion (in deflection with thickening) before straightening the septum.

Dr. G. A. LELAND advocated breaking off all the exostoses which seemed to run into the inner maxillary ridge. He used cotton, with a two per cent. creoline solution, to plug the nares.

Some Reflections on Atrophic Rhinitis. W. P. PORCHER, M.D. (Charleston, South Carolina).

The author referred to the various current theories regarding the nature of this trouble. He would regard it, not as a disease *per se*, but as a result of other inflammations which have ended in a purulent discharge, leading to a washing away of the epithelia and the destruction of the mucous membrane.

He related the history of a woman, aged thirty-four years, of good antecedents. Scab formation came on after measles fifteen years previously. The inferior and middle turbinates were gone on the left side and injured on the right. Stimulating applications and the iodide (given simply with the hope of increasing secretion, did no good. Thinking that perhaps the antrum was at fault, this was opened and irrigated, but without avail. Finally, cotton tampons, dipped in a solution of iodine and iodide in glycerine, had caused almost a hypersecretion. Crusts still formed to some extent, but they were discharged more freely.

Dr. LEILER had found the Gottstein cotton tampon the only efficient measure in these cases. It needed no medication, for it would quickly imbibe moisture from the nostrils, and would strain and moisten the inspired air. Of late he had tried aseptic wool for the same purpose, but had discarded it in favour of the cotton. He employed nasal washings twice daily.

Dr. THOMAS HUBBARD (Toledo) was accustomed to use an alcoholic solution in the same way. The cotton tampons moistened therewith should be wrapped around the turbinated bones.

Dr. C. C. RICE (New York) would wash and oil the nostrils, using any one of the numerous oily preparations now at our disposal. Overstimulation was to be avoided.

Dr. LELAND employed antiseptics and stimulants. For the latter he used cocaine in ten per cent. solution for its secondary effect—that is, of congestion. The addition of resorcin to the solution of cocaine would prevent the poisonous effects of the latter.

Dr. A. W. DE ROALDES (New Orleans) had used with success electrolysis with cotton-wrapped electrodes.

Dr. RUE preferred mild silver nitrate solutions with mild galvanism. It was necessary to look after the accessory cavities, as scabs did not come from the mucosa alone.

Dr. J. E. NICHOLS employed ortho-chloro-phenol in from ten per cent. up to full strength. It was a deodorant, disinfectant, and stimulant.

Dr. INGALS did not think it harmful to use, say, one to two grains weekly of cocaine in the nostrils in these cases. He had found value in weak strengths in powder or oils of yellow oxide of mercury.

Laryngeal and Post-Nasal Photography with the Aid of the Arc Light. (Lantern Demonstration.) THOMAS R. FRENCH, M.D. (Brooklyn).

The method of photographing the larynx which the writer described at the International Medical Congress held in Copenhagen in 1884, had a number of disadvantages, which has made the art a somewhat unsatisfactory one. The principal difficulty was with the source of illumination.

which was that of sunlight. The necessity for limiting the use of the method to a few hours on days in which the sun shone brightly, and the varying power of the sun's rays, with the consequent uncertainty of the success of the exposures, reduced the usefulness of the method to a considerable extent.

During the past few months he has succeeded in adapting the electric arc light to the method, so that good photographs can now be taken at any time, day or night. With sunlight as a power of illumination it was necessary to bring the subject to the light. With the new method we can bring the light to the subject. This, I feel sure, will greatly enhance the usefulness of laryngeal and post-nasal photography, and enable us to make studies of the interior of the larynx, the posterior nares, and the vault of the pharynx, in normal and pathological states, far better than has yet been done.

As the distance between the camera and the object to be photographed is very short, one of the greatest difficulties was to adjust the light to the sensitive plate so that a depth of focus would be obtained. To do this a small diaphragm, a rapid shutter, a very sensitive plate, and a powerful light must be used.

The necessary outfit for producing a sufficiently powerful light for the purpose consists of an automatic two thousand candle-power arc lamp, which is partly enclosed in a metal box. On the front face of the box is a condensing lens, which when placed nine inches from the arc gives a focal distance of twenty inches. This relation of light and lens, after repeated trials, was found to give the most satisfactory illumination for the purpose.

The lamp and accessories are fitted to a narrow board, which is placed on a table of sufficient height. The light can be raised or lowered by tilting the board forwards or backwards by means of a device designed for that purpose.

The rheostat, which is a necessary controller of the light, is placed on a shelf beneath the table top.

The manner of using the light in photographing the larynx or posterior nares is the same as I described in connection with the sunlight condenser in the "New York Med. Journal," December 13th, 1884.

The beam of light should be caught upon the forehead mirror several inches inside of the point of focus. Though good photographs can usually be obtained at the first sitting, two sittings are sometimes required. At the first the focus is found, and with it perhaps a good photograph. If, however, a good photograph is not secured at the first sitting, the focus and the amount of light needed being known, there is no difficulty in obtaining at the second sitting as many good photographs as desired. At the second sitting of one patient I made eighteen exposures and obtained fourteen good impressions. If the apparatus is in order, the time needed to secure a photograph of any larynx does not exceed that necessary for making a careful laryngoscopic examination.

The art of photographing the larynx may be somewhat difficult to acquire, but when once understood it is a perfectly simple procedure.

[Twenty photographs of the larynx and posterior nares were exhibited on the screen during the reading of this paper.]

Afternoon Session.

Presentation of Instruments—

By Dr. INGALS, of a portable air compression apparatus, in which the pump and spray tube could be packed in the cylinder itself.

Also of an improved nasal saw.

By Dr. SEILER, of a double screw hook, attached to a spiral, and covered with another spiral acting as a shield. Rotation of the latter exposed the hooks, which could be attached to any soft foreign body in the air passages or in the ears. The principle was merely that of the flexible shaft of a dental engine.

By Dr. ROE, an improved set of instruments for operation on the nasal septum.

By Dr. HEBBARD, of an improved nasal *écraseur*.

Recent Progress in the Treatment of Malignant Disease of the Larynx.
Dr. BRYSON DELAVAN, M.D. (New York).

Speaking in a general way, it must be admitted that surgical effort has shortened rather than lengthened the lives of patients suffering from laryngeal epithelioma. This statement is based upon the fact that the average duration of life in such cases without removal of the larynx has been a year and a half. But there are indications of a better showing for the future as concerns operative measures.

These may be divided into the following groups:—(1) Thyrotomy, with or without partial laryngectomy; (2) complete laryngectomy by the Solis-Cohn method; and (3) complete laryngectomy in cases of extensive laryngeal disease with glandular involvement.

Butlin has laid down with reference to thyrotomy the following propositions:—

1. Every malignant growth of intrinsic origin which can be dealt with should be treated by an operation in the absence of decided indications to the contrary, and operation should be done with the least possible delay.

2. Every laryngeal growth suspected to be malignant and of intrinsic origin, and apparently within easy reach of free removal, justifies an exploratory thyrotomy in a suitable patient in the absence of infiltration of surrounding structures, and of involvement of the lymphatic glands. For a thyrotomy we must have a good illumination, and swabbing with cocaine of the parts to be operated upon should be done, in order to contract the vessels and prevent parenchymatous hæmorrhage.

As to after-treatment, the tampon canula should be immediately removed from the trachea, the interior of the larynx dusted with iodoform and boric acid, and the patient placed on the bed with the operated side down, with one small pillar under the head. The wound is not plugged with gauze, but is kept open and dusted twice daily (preferably during an inspiration) with the mixture above named. The boric acid lessens the danger of iodoform poisoning. Rectal nutritive enema may be necessary for a while, but on the very day of operation the patient may

try to swallow a little sterilized water, and, if this succeeds, he may be at once placed upon a fluid diet. The upper part of the body should be bent well forward over the edge of the bed in trying to drink.

The advantages of the Solis-Cohn method of laryngectomy (in which the larynx is completely removed and the edges of the tracheal severed and fastened to the external edges of the cervical incision) are :—

1. Less danger to life from inspiration—pneumonia is greatly lessened.
2. Swallowing is as easy as under ordinary circumstances.
3. In at least three cases, power of phonation has been acquired with a voice at least as satisfactory as by any artificial mechanism.
4. The patient's comfort is greatly increased, while disfigurement and the need for an artificial larynx are entirely done away with.

As to the third variety of operation, Cheyne says that, as compared with the cancerous disease in the breast, the disease in the throat is in some respects more favourable for cure, and in some less so; more favourable as regards glandular deposits, for in the neck we have an extensive glandular area freely exposed to view; but less so because the disease in the larynx is less exposed to view and to operative manipulative measure.

It is advisable to do a preliminary tracheotomy a few days before operation. The patient must not be too old, must possess good vitality, must be free from physical defects likely to complicate recovery, and must be so situated as to enjoy careful after-treatment.

In reviewing the recent progress in treatment of diseases of the larynx, it must be apparent that it has nearly all been made by long and careful study on the part of general surgeons. The time has long gone by when an unsuccessful attempt at laryngectomy by one not fitted for the work can do anything else than bring reproach upon the operator and discredit upon the operation.

Dr. PORCHER regarded the Trendelenburg canula as a dangerous instrument. A preliminary tracheotomy should precede by some days the operation on the larynx, for if both operations were done at the same time, it was hard to tell whether blood was trickling into the trachea or not.

Dr. SEILER thought more credit was due to American surgeons than had been given by the reader of the paper. In 1885 Dr. Roswell Park had excised the larynx in a man of seventy-six years without a preliminary tracheotomy, for epithelioma of the vocal cords and left ventricular band. Chloroform was used, and the operation lasted one hour. The patient lived seven years.

Dr. H. L. SWAIN (New Haven) would lay stress upon the necessity of removing the cervical glands. These sometimes diminish in size after the tracheotomy is done.

Dr. ASCH believed gauze packing of the trachea preferable to the Trendelenburg canula.

Dr. JONATHAN WRIGHT believed that these cases should not be undertaken by the average laryngologist, but be placed in charge of the general surgeon.

Intubation in the Adult; with Special Reference to Acute Stenosis of the Larynx. H. E. CASSELBERRY, M.D. (Chicago).

Although chronic stenosis of the larynx, especially of the syphilitic and tuberculous type, has received due attention in reference to treatment by intubation in the adult, the management of acute stenosis by the same means has received as yet but little notice.

It does not suffice to assume that the adult may be dealt with exactly like the child, or that the treatment of acute stenosis, with its associated state of helplessness and exhaustion, is identical with that of chronic stenosis. Important distinctions obtain, both as regards the technique of the intubation and the possible scope of the operation.

The six cases related embrace four of laryngeal diphtheria, one of acute œdema of the larynx, and one in which the stenosis was of obscure origin, but probably also œdematous.

The diphtheritic cases all terminated favourably, but presented various difficulties in the performance of the intubations—notably, in one, the necessity to intubate with the patient in a recumbent or semi-recumbent posture in bed, to accomplish which the best position was with the patient on the right edge of the bed, and the operator standing to the patient's right, in which location one's right arm rises in front of the patient's mouth without awkward twisting of the operator's body. In another, at one time, firm spasm of the glottis, which was actually seen in the laryngeal mirror to occur, rendered a third effort necessary before the tube slipped into place. It was done under laryngoscopic view by holding the tube firmly at the entrance of the larynx for a few moments, which excited cough, and with it the opening of the glottis. All the cases showed some intolerance to the presence of the tube, as manifested by more frequent expulsion than with children. One case nearly succumbed from accumulation of viscid mucus—not in the tube, but in the trachea and larger bronchi, below and around the tube, which condition was at once suspended by the extraction of the tube.

The case of acute œdema of the larynx was complicated by chronic spasm of the masseter muscles, which prevented wide distension of the jaws. In consequence, intubation failed, the patient being measurably exhausted by the two efforts made. Tracheotomy was performed, but the patient died just as the operation was completed, presumably from failure of the heart in connection with secondary œdema of the lungs. Immediately *post mortem* the diagnosis was confirmed, and the feasibility of intubation demonstrated in acute œdema of the larynx with a patient recumbent, possibly collapsed, but uncomplicated by "setting" of the jaws, by (after death) forcibly distending this patient's jaws, when the tube could be passed and repassed with ease.

The liability to pressure decubitus by the tube in acute œdema of the larynx should be remembered, and not too large a tube inserted.

The other case, which was presumably one of œdema of the larynx, or of subglottic œdema, terminated favourably and without difficulty.

The following conclusions as to technique are formulated :—

1. For one accustomed to the use of the laryngoscope intubation on adults is easier and more certain under its guidance; therefore, for a

patient of adequate composure and able to maintain the sitting posture this method should be selected.

2. A patient lacking only composure, one whose inclination is to resist rather than to assist the operator, may be closely wrapped in a blanket to pinion the arms and legs, seated in a straight-back chair, the head inclined slightly backward, the mouth gagged, and the finger used as a guide, as in children.

3. A patient lacking strength to move from bed, and composure or strength for laryngoscopic insertion, should be placed close to the right edge of the bed, so that the operator can stand to the patient's right side; the head and shoulders should be well raised by pillows, the neck moderately extended, and the method by the sense of touch otherwise fulfilled. Kneeling on the bed in front of the patient is unnecessary.

4. A patient who is moribund, or nearly so, may have the tube inserted while in the recumbent position. The operator should stand to the patient's right, who should therefore be placed on the right edge of the bed.

Spraying the fauces with a five per cent. solution of cocaine facilitates introduction by whatever method, and tends to lessen the liability to premature expulsion.

The extraction of the tube is especially easy under laryngoscopic illumination, otherwise it is done in accordance with the same principles as regards the position of the patient as pertain to its introduction.

The author's posture method of feeding subsequent to intubation, by inclining the patient's head and shoulders downward, in which position fluids may be swallowed without gravitating through the tube into the lungs, can be successfully used with adults, but naturally with more difficulty at first than with children, on account of unmanageable weight and size. It is best done by hanging the head and shoulders over the edge of the bed downward nearly to the floor. Otherwise, adults more readily than children may be fed upon semi-solids, as custards, stiff corn starch, and oysters, which will slide over the top of the tube without entering it.

Regarding the scope of intubation for acute stenosis in adults, the four cases of laryngeal diphtheria herewith reported, all of which terminated favourably, justify the conclusion that this operation may with advantage be substituted for tracheotomy in that disease.

Concerning acute œdema of the larynx, one's position is not so clear. The operation is technically feasible in uncomplicated cases even when exhaustion is extreme, and I would consider a single attempt justifiable provided, in order to guard against pressure decubitus, the smallest size of the adults' set of tubes is first selected.

When complicated by having the jaw "set," or by pharyngeal swellings which might obstruct the top of the tube, either or both of which conditions may be encountered in cases of acute œdema of the larynx, secondary to peritonsillar abscess, Ludwig's angina, phlegmonous angina, retropharyngeal abscess, etc., intubation is absolutely contra-indicated, and fruitless efforts thereat can only serve to intensify the exhaustion and suffering of the patient.

There are other acute conditions or acute exacerbation of chronic states which might be remedied by intubation. In a case of arthritis deformans, which suffered an acute exacerbation involving the larynx, the dyspnœa was so urgent that I expected to be compelled to intubate at any moment for several days.

Traumatic œdema of the larynx as by scald, corrosion, or fracture might in suitable cases be treated in this way.

Laryngismus stridulus or reflex spasm of the glottis, though rare in adults, might constitute another indication.

Also œdema of the larynx secondary to chronic syphilis or tuberculosis might come within the same category, since the œdema may figure as an acute exacerbation provoking sudden and urgent dyspnœa.

The treatment of chronic stenosis of the larynx and trachea by intubation is not included within the scope of this paper.

Dr. SIMPSON said that we should not understand by the word "acute," as applied to diphtheria, the same thing as by "acute" applied to the œdema of Bright's disease, or œdema engrafted upon some chronic stenosis which has not been sufficient to impede breathing. In intubating all these cases, care must be taken to draw the tongue well forward.

Dr. HUBBARD had seen tracheal œdema while the larynx was normal. In one case intubation had been unsuccessfully tried, tracheotomy was done, but the patient died. In another case due to iodism there was œdema of the face, pharynx, and trachea with an intact larynx. This case had been relieved by pilocarpin.

Dr. DE ROALDES regarded intubation as the best procedure in fractured larynx.

Spindle-Cellled Sarcoma of the Nasal Passages. Dr. J. E. BOYLAN (Cincinnati).

At the time of introduction, the patient had suffered from obstinate epistaxis, stoppage of the nose, and occasional acute pain for several months. There was a noticeable bulging under the left nasal bone. Upon tilting up the tip of the nose, a brown-red mass at once became visible filling in the passage, which was found to be limited behind by the posterior nares. The growth was removed with wire *écraseur* in two sections, and the base curetted, hæmorrhage, which was quite profuse, being arrested by plugging with iodoform gauze. The removed growth appeared as a solitary, soft, liver-coloured tumour, the size of a hen's egg; the attachment, about an inch and a half long, having probably been confined to the inferior turbinated body. Expert microscopic examination showed the growth to be a spindle-celled sarcoma. A year from the date of operation, inspection of the patient exhibited no signs of recurrence. Twenty-two months after the operation the patient announces that he finds himself without symptoms of recurrence and in excellent health.

The case is offered as a contribution to the accumulating number of results which tend to modify the hopeless prognosis attributed to sarcoma. Twenty-one cases taken from the literature, since Bosworth's tabulation of 1889, were enumerated, and the results referred to.

Naso-Pharyngeal Fibrous Tumors. Dr. E. FLETCHER INGALS (Chicago).

Case was reported of a boy aged eleven years, and seen in April 1894. From his fifth year there had been a fulness of the right cheek associated with nasal stoppage. His general condition was good, the voice had a nasal twang, and the sense of smell was deficient. The nostril (right) was occluded by a reddish mass in its posterior third, but there was no tumour in the cheek. The patient was seen again three months later—when under cocaine injected hypodermically, and used in spray, the growth was removed by the galvano-cautery *écraseur*. There was considerable hæmorrhage from the nostril, which was checked by packing with surgeon's lint dipped in a saturated solution of iodoform in ether, and then a boric acid solution in alcohol; then thymol in albolene was used. By subsequent cauterizations the base of the growth was thoroughly destroyed, but some cicatricial adhesions remained in the vault.

For the swelling in the cheek under the right zygomatic arch, measuring two by three centimètres, submucous injections of lactic acid were made, fifteen minims of a twenty-five per cent. solution combined with a little three per cent. carbolic acid and twelve per cent. glycerine, being about the average quantity employed. There was some increased swelling after injection; but the injections gradually removed about two-thirds of the original mass. Dr. Ingals believed this remedy good in cases where the knife or galvano-cautery are inapplicable.

Naso-Pharyngeal Fibromata. Dr. CHARLES M. SHIELDS (Richmond).

The author read a paper on this topic, reporting two cases.

The first case occurred in a white male, aged twenty-three. The growth was firm and unyielding to the touch, and filled the post-nasal space and left nostril. It was attached to the vault of the pharynx, and for a short distance to its posterior and left lateral wall, and in the left nostril to the outer wall for about half its length. It closed the right nostril by crowding the septum to that side, completely shutting off nasal breathing, and producing the typical "frog face" and "dead" voice.

After injecting a ten per cent. solution of cocaine with a hypodermic syringe into the left nostril, a filiform bougie was with difficulty worked through to the throat, having attached to its anterior end a piece of silk, and this in turn to the sharply-bent loop of a cold wire snare, which was in this way pulled back into the throat and out of the mouth, and fashioned into a well-rounded loop. The nasal ends of the wire were threaded through the canula of the snare and drawn up. For five hours it was tightened by turning the nut with a pair of gasfitter's pliers, when the wire broke. The next day the loop of a galvano-cautery snare was in like manner drawn through and applied, cutting through the growth in a few minutes, which was pulled down and out of the mouth. Its base measured one and a quarter by one and two-fifths of an inch.

The portion in the left nostril was also removed with the cautery snare.

The patient returned for examination after fourteen months, and a piece the size of a grain of corn was found and removed from the left

nostril, and some thickening at the seat of the main tumour at the vault of the pharynx cauterized.

Dr. Shields stated that he reported the second case while it was still undergoing treatment, because of the fact that it occurred in a woman of forty-eight years of the negro race. Nélaton, Gosselin, and other older observers considered women exempt from these tumours, and Morell Mackenzie states them to be most exceptional, yet we know that women do not possess complete immunity. As to race, however, he considered the case to be unique, never having seen a case reported in a negro. Bosworth likewise states that he has never seen a case reported as occurring in that race.

This patient had a tumour filling the entire post-nasal space and pushing the palate well forward, but with no nasal attachment. Electrolysis had been tried for six weeks with but little reduction in size resulting. A piece cut from the tumour and examined with the microscope showed it to be a true fibroma. In speaking of the treatment of these tumours Dr. Shields thought that there were few—if any—that could not be reached through the natural passage, and that resection of the superior maxilla or other preliminary operation was rarely required. He considered the use of the ligature, chemical caustics, thermo-cautery, evulsion, etc., as not worthy of consideration in comparison to the use of the hot or cold snare. In the majority of cases the galvano-cautery snare possessed most advantages, and when irido-platinum wire was used it was sufficiently elastic to be placed over the tumour by aid of the finger in the post-nasal space, and was very much stronger than the ordinary platinum loop. The current should be turned on for a few seconds, and then a rest of a minute or two given the patient before the wire was again heated. In this manner the periods of pain were of very short duration, and the wire does not become hot enough to cause hæmorrhage. The hot snare does in a few minutes what the cold one may require hours to perform, thus shortening the pain to the patient. With it, too, we have an instrument capable of cutting through the largest and firmest tumour with certainty—a fact of which we cannot be sure with the cold snare.

Another advantage in tumours with a broad base is that after being placed in position the loop can be heated and at once buried in the growth at its preliminary tightening, thus preventing it from slipping off. Finally, while removing the growth it thoroughly cauterizes every portion of the remaining base.

Dr. CASSELBERRY alluded to two cases—one successful, and the other an utter failure owing to adhesions surrounding the mass. It was a good plan to slit up the mass with the cautery knife, so as to afford a hold for the wire. He had seen some good results follow the use of electrolysis.

Dr. NICHOLS said it was difficult to remove such tumours through the nasal passages owing to malpositions of the nasal septum. In one case he had been able to shell the tumour out.

Dr. DE ROALDES said that by slitting the palate these growths could be made much easier of access.

THE BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION.

April 10th, 1896 (continued).

DR. MACINTYRE'S *Röntgen Rays Demonstration.*

The following objects were shown at the demonstration:—

Apparatus.—Secondary cells, induction coil, several varieties of Crookes tubes, some of which had been prepared at special exhaustions.

Photographs.—Firstly: The photographs were shown either by means of the magic lantern screen or mounted plates, or both, including different parts of the skeleton, such as the spinal column, ribs, clavicle, bones of the head, face, and all the joints of the body.

Secondly: Objects of special interest in the throat and nose, including bones of the face, internal ear (in the dead subject), mastoid cells, jaw, hyoid bone, cervical, and vertebræ.

Thirdly: Photographs of the soft tissues of interest in our special department, such as the tongue, larynx with its cartilage, cavity of the pharynx and opening of the œsophagus, showing the relationship to the deep structures of the neck and spine.

Fourthly: Pathological conditions, including tumours of the jaw, fractures, periostitis, foreign bodies in the region of the neck and chest—in one case a coin impacted in the œsophagus beside the third dorsal vertebræ—etc.

Fluorescent screens and cryptoscopes.—Screens prepared with barium-platino-cyanide, potassium-platino-cyanide, lithium-rubidium-platino-cyanide, calcium sulphate, calcium tungstate, magnesite, etc.

Cryptoscopes.—Simple and binocular, with suitable screens of the above-mentioned salts.

Mr. President, Ladies, and Gentlemen,—I should like in the first place to correct the title of my demonstration as published in the medical journals. There it is entitled "The New Photography," a term to which I object very much, because Röntgen did more for surgeons than provide us with a means of photographing hidden objects. At present we can actually see a great many images of anatomical structures by means of Röntgen's fluorescent screens, and for practical purposes this must in the end displace the more tedious and direct method of photography.

You will notice in the following remarks that I rarely use the term "skiagraph"; not that I have any particular objection to the introduction of a new term in medicine or surgery, but I think the word does not describe the pictures which we are now able to take. At first, no doubt, we obtained little better than shadows; but those who have had the best results can fairly claim that the intimate structures as well as the outline may be obtained, and in this sense we can scarcely call them shadows. Moreover, the term was adopted at the earliest period of the discussion as to the exact nature of the x rays themselves. Now, while at first these observers might be inclined to think they were longitudinal vibrations in the luminiferous ether, a considerable number of physicists are now inclined to look upon them as transverse vibrations, probably far beyond

what we have hitherto considered the ultra-violet end of the spectrum. Should this view be the correct one, then these will literally be photographs or drawings by light.

In my earliest experiments I devoted myself entirely to the simplification of the apparatus, because the descriptions in the newspapers—at least, in this country—suggested great complications. One read of ten to twenty thousand volts alternating current; batteries of twelve Leyden jars, etc. It was quite evident, therefore, that for practical purposes in surgery, and particularly with a view to portability, something very much simpler would be required. As early as the 5th February of this year, at a demonstration given at the Philosophical Society, Glasgow, by Lord Blythwood, Dr. Bottomley, and myself, I was able to show that all the ordinary phenomena of photography could be demonstrated by means of a secondary battery giving eight volts and six ampères of current, an induction coil giving two to three inches spark, and a Crookes tube not specially designed, and selected from an instrument-maker's stock. Under certain conditions I found it advisable to use a Tesla coil in addition to these, but need hardly say now this part of the apparatus may be dispensed with. My best apparatus consists of the current supplied from the main, and measured by Lord Kelvin's ampère gauge and volt tester, a rheostat to reduce the strength as desired, a transformer in the shape of an induction coil giving 10-inch spark, and the ordinary focus tube selected by Mr. Herbert Jackson and designed by Crookes himself years ago.

The Crookes tube is such an important part of the apparatus that I think it well worth special consideration. We now make these tubes in Glasgow, and when it is being exhausted I superintend the details by testing the result on fluorescent screens until the maximum has been obtained. At present we have no fixed rule, nor can the instrument-makers predict what will happen with a tube when it leaves the pump; and in the absence of these facts I simply go and test it while it is being exhausted. It will be observed that after a tube has been used for a few minutes changes take place in the fluorescence and actinic power. If this be not carefully attended to the results are very unsatisfactory; but by gently heating the tube with a spirit lamp or Bunsen burner it is quickly brought back to an efficient state, and by this means the exposures are reduced and the fluorescence more brilliant.

When I began my experiments I naturally directed my attention particularly to objects in the throat, chest, nostril, head, and face; but it was found impossible to get anything like a real knowledge of the photography or images on the screens without going through a careful training in different parts of the human body. My first photograph was taken on the 31st January, and by the 30th March I had taken photographs of all the skeleton and joints, including the vertebral column and the interior of the skull. While making these experiments it became evident that three very important things would require to be carefully considered if correct images were to be obtained:—(1) penetration, (2) definition, (3) how to obtain the deep-seated structures in the human economy without photographing what might be in front, or behind, or in

the vicinity of the particular object to be photographed. I should like to say a word or two on each of these points. Firstly, with regard to penetration. The secret of penetration lies, of course, in a powerful enough apparatus, but not the least important is a good Crookes tube at a proper vacuum. When I say that I have been able to pass the rays in sufficient enough strength through the human body to see images of, as well as to photograph, the vertebral column, ribs, and all the joints of the body, it will be evident that we have here a force capable of penetration beyond anything at first conceived. Nay, more: two persons placed in front of each other only absorb a certain amount of rays, and, in fact, they can be passed through the wall in one room in sufficient strength to obtain fluorescence in the next. Each structure of the human body absorbs the rays more or less, but it must be evident that what we desire in surgery is not only sufficient penetration, but definition, so as to bring out the particular structure we are examining in contrast with the others. By carefully studying this I have been able to photograph not only the bones but the fasciæ and tendons, some of the muscles and cartilages, particularly of the larynx, cornua and body of the hyoid bone, and these in the living adult subject.

Secondly, definition. While it is true we have no method at present of focussing in the ordinary sense—that as yet we have no evidence of refraction and reflection—yet correct definition may be obtained after the following manner:—If a piece of white paper be laid on the table, and a pencil held at a short distance away from it, a shadow of the pencil will be got on the paper. The nearer the pencil is to the paper the sharper the image will be. If the pencil be now removed from the paper towards the source of light the shadow will become less distinct; but if the pencil be held in that position and the source of light removed still further from the pencil the shadow becomes more and more distinct. Hence we could formulate a rule that there is definite relationship between the position of the source of light, the object to be photographed, and the piece of paper upon which the shadow is to be thrown; therefore, the further the distance of the object to be photographed from the sensitive plate the greater must be the distance between the object and the source of the x rays. In attempting, therefore, to photograph the deeper structures of the body or the tissues of the neck, it is evident we cannot get the object close to the sensitive plate, so the Crookes tube must be removed a greater distance from it. No doubt this increases the exposure, but that will shortly be overcome with further improvements in the tube.

Thirdly, how we are to photograph certain objects and omit others in the vicinity. Let us take, for example, the skull as seen on the screen. I have been able to show that one can photograph straight through the skull and omit one side of the head in the picture and photograph the other, although both are in the course of the x rays and between the sensitive plate and the Crookes tube. This is one of the many advantages of the "focus tube." In this particular apparatus the cathodal torrent is sent from the aluminium disc at the one end of the tube and focussed on a small square of platinum placed directly in its course. The x rays

spring from this point and radiate in every direction ; in other words, form a cone, the apex being at the platinum plate. It naturally follows that the x rays are not proceeding on parallel lines, but are all diverging from a point. Consequently, if an object be placed very near the source of the x rays a very indistinct image will be got on the sensitive plate, but those structures which are near the plate (the other side of the cranium) are photographed. Of course, were the bones of the head capable of stopping all the x rays nothing would be got, but it is only a matter of absorption in degree, so that when we are photographing through the skull sufficient force passes through the one side to photograph the bone on the other, but the image on the side next the tube is so diffuse that it is not seen on the plate. By this means one can select different bones in the body, and so we can photograph the mastoid cells, or even show the grooves for the meningeal arteries and the sutures between the parietal and occipital bones.

EXPOSURE OF PLATES.

Passing now to the more practical aspect of the question, let me say the question of exposure is of great importance. My first photograph was taken in forty minutes--the last in half a second, with Paget XXXXX plates and hydrokinone developer. This advance I attribute for the most part to a good Crookes tube and a better knowledge of how to keep the vacuum right during the exposure. There can be no doubt that we will shortly have instantaneous photography.

DIRECT VISION.

While photography may be exceedingly interesting to us for permanent records, no one can doubt for a moment that what the surgeon requires is examination of the various structures by means of fluorescent screens or direct vision. I have now prepared a number of these screens, and have seen images of the spine, ribs, and most of the joints of the body. I prepare the screens by making a frame of wood of suitable shape and size, and a piece of paper (preferably black) is afterwards damped on both sides and glued to the frame. When dry, the paper is stretched, and gives a flat surface to be coated with the salt. When the paper is thoroughly dried, one surface is covered with gum arabic or liquid glue and a thick layer of the salt uniformly spread upon it. Another method, which I described in "*Nature*" some time ago, is to mix the salt with a solution of mucilage or gelatine until it is about the consistency of collodion, and, just as in the old wet process, this is poured on the surface of the paper—or for that matter on a sheet of glass—and moved backward and forward in such a way as to get an even layer to remain on the plate. I have tried barium-platino-cyanide, potassium-platino-cyanide, lithium-rubidium-platino-cyanide, sulphide of calcium, the calcium tungstate as recommended by Mr. Edison in its crystalline form, and many other fluorescent substances ; but my choice lies between the barium and platinum double salt. The potassium has greater fluorescence, but sometimes, and under certain conditions, we obtain a more pleasing picture with the barium ; at least, that has been my experience.

The salt recommended by Mr. Edison has one great recommendation

in its favour, viz., it is comparatively cheap ; but it is not as good. There is a mistaken notion abroad that the work done on fluorescent screens and the cryptoscope are one and the same thing. This is entirely wrong. Salvioni and others have made an instrument called the cryptoscope. In the early part of February of this year I obtained some of the crystals of barium-platino-cyanide from Lord Blythswood, and made an instrument quite independent of any other worker. What I wish the meeting to understand is the difference between a fluorescent screen and the cryptoscope. I have been surprised to see in some of the medical journals how these two terms have been confounded. Röntgen himself is entitled to the credit of demonstrating the phenomena by direct vision, and those who take the trouble to read his original paper will see that the first paragraph of his famous work and the first experiment of a successful nature carried out by himself prove this. He states that by enclosing a Crookes tube, excited by means of a battery, in a cardboard covering, and placing a piece of paper coated with barium-platino-cyanide in front of it, an object between the two will have its shadow thrown on the screen, which fluoresces under the action of the rays. The only difference in a cryptoscope is that we use a small box instead of the darkened room, and of course this has something to recommend it in practice. There is no injustice to Salvioni in this statement, because he acknowledges in his own paper that there is nothing which could not be deduced from Röntgen's original experiments in anything he has done. My first difficulty was to obtain fluorescence, and the earliest experiments failed because the coating was not thick enough. By properly preparing the screen, however, and exhausting the tube to its maximum, I have been able to examine the cavities and bones of the face, chest, spine, clavicle, sternum, ribs, etc. A boy was sent to me last week from the Glasgow Royal Infirmary, who six months ago had swallowed a half-penny, and complained of great pain always after food in the region of the cardiac orifice of the stomach. I examined him by means of the fluorescent screen, and had no difficulty in seeing straight through the body in the region of the spine, but obtained no evidence of the coin where he located the pain. On passing the screen up the spine, however, I saw the coin lying near the third dorsal vertebra. He was consequently photographed, and a lantern slide of this is now thrown on the screen.

CRYPTO-LARYNGO- OR RHINOSCOPE.

It was natural that those devoted to the special surgery of the larynx should seek for the application of the method in their own department, and with this view I made a number of experiments in order to obtain a lamp small enough to go inside of the mouth. The result was quite satisfactory, but the objects are too near to be seen or photographed. I therefore tried another plan, and now place the fluorescent screen inside of the mouth and the lamp outside. I made some small mirrors coated on one side with the salt and covered with aluminium. Again, I made some tongue depressors, simply flat strips of glass, coated and covered in the same way. By placing the tube outside I was able to get an image of the septum and other parts of the cavity on the fluorescent

screen in the mouth. In the same way the roots of the teeth may be seen. If you wish to examine the parts below or above the lower jaw you simply put the Crookes tube below or above the level of the neck and pass the rays through the tissues. If you desire to examine the tissues externally—that is to say, if you wish to pass the current through the neck—you place a small fluorescent screen on one side and remove the Crookes tube to a suitable distance. By this means I have no difficulty in demonstrating the presence of foreign bodies, and need hardly add they are easily photographed. This application I intend, with your permission, to name the laryngo-cryptoscope or laryngo-rhinoscope, according as we use it in the different parts of this region.

And now the question will naturally arise in the minds of all present how far these rays are likely to prove useful in our special department. Personally, I prefer to leave the speculative field very much alone, and state what has been accomplished. I may be allowed, however, to point out that I have already clinically proved its use in the detection of foreign bodies in different parts of the upper respiratory tract. Further, the fact that we can see and photograph different structures in the neck localises these objects: and, again, in the case of the larynx, and certainly in the case of the œsophagus, it is easy to see instruments made of certain materials (particularly of steel during the action of attempted removal of foreign bodies. Secondly, in one of the photographs shown upon the screen you have seen destruction of the hard tissues of the upper jaw from malignant disease. Thirdly, we have here got a force capable of doing a great deal more than penetration, as is the case of the illumination of the antrum of Highmore by means of ordinary light: by the arrangement above suggested we can now recognize some, and will very likely, as time proceeds, be able to recognize the outlines of nearly all the deep-seated structures on fluorescent screens. Some have said that the soft tissues are transparent to the x rays; this is wrong, as all tissues absorb some of the rays. It is only a matter of degree. I could say much more in this direction, but think the possibility of the utilization of Röntgen's discovery in our special department has already been sufficiently demonstrated.

SOCIÉTÉ FRANÇAISE D'OTOLOGIE et de LARYNGOLOGIE.

May 4th to 7th, 1896.

(From "La Semaine Médicale.") Reported by Dr. JOAL.

M. POYET. *Treatment of Diffuse Papilloma of the Larynx.*

Of all tumours of the larynx, papillomata are the most frequent. They are usually situated at the anterior angle of the vocal cords, but in certain cases they invade a greater or less extent, or even the whole, of the larynx. These are the diffuse papillomata, and they are found in very young children, or else in patients in whom a single circumscribed papilloma has gradually spread over a large area by a process of auto-inoculation.

What treatment should be carried out?

In young children tracheotomy should be done, and should be accompanied or followed by thyrotomy and curetting of the larynx. In children of six or seven years old, if there is danger of asphyxia, the above treatment is indicated; if, on the other hand, respiration is not affected, one ought to endeavour to operate per *vias naturales*, specially as papillomata once removed endo-laryngeally do not tend to recur in young people. The best instrument to use in such cases is the crushing forceps; cutting instruments are dangerous in children. In adults, local caustics have been tried, but without success—*e.g.*, nitrate of silver, acetic acid, dilute chromic acid, chloride and sulphate of zinc, sulphate of copper, alum, savin, etc. Surgical treatment should be at once resorted to.

Evulsion is carried out by means of forceps of various forms, the best known being those of Fauvel and Mackenzie. Under cocaine their use is quite easy, specially when the papilloma projects beyond the level of the glottis. The operation is generally followed by a fairly smart hæmorrhage, which, however, soon ceases of itself.

Excision may be done with scissors, knives, or guillotines, and is suited for papillomata springing from the free edge of the true or false cords.

Evulsion and excision combined may be used for hard warty papillomata; the instrument to use is the cutting forceps.

Abrasion consists in crushing between the blades of the forceps any portions of the tumour that one can seize.

Curettage completes the operation by scraping away whatever has been left by any of the above methods.

The *galvano-cautery* is little used now, because it is impossible to apply it to a growth long enough to be effective.

To prevent recurrence of the growth, the larynx is to be swabbed out with antiseptic cotton wool and the bleeding stopped, then a solution of chloride of zinc or salicylic acid applied.

If on recurring the papillomata become hard and warty, and appear to degenerate into epitheliomata, tracheotomy should be performed, then thyrotomy, and a careful and thorough removal of all affected parts. The simplicity of the operation of thyrotomy should prevent any hesitation in adopting it when the growths are very diffuse, or when they recur frequently. In these cases, after thoroughly curetting the parts, the thermo-cautery should be applied.

Extirpation of the larynx is to be avoided, even when there is reason to fear malignant degeneration of the papilloma.

M. HELME. *Treatment of Adenoid Vegetations.*

In spite of all that has been done since the time of Meyer, the only effective treatment of adenoids is the surgical.

The indications for treatment are not only signs of nasal obstruction, but remote symptoms, such as headaches, laryngismus stridulus, enuresis nocturna, obstinate otorrhœa, deafness, etc. Diagnosis of adenoids must always be confirmed by posterior rhinoscopy, or by digital examination; in this latter the most rigorous antiseptics must be carried out.

Contra-indications are very few—*viz.*, hæmophilia, anomalies in the pharyngeal arteries. The coincidence of an acute tonsillitis, or of

scarlatina, measles, etc., necessitates the postponement of the operation.

Before operating a local and general antiseptic treatment should be prescribed, and the operation should be done during narcosis.

Bromide of ethyl freshly prepared is the best anæsthetic. Five to ten grains will produce the desired effect in from twenty to forty-five seconds.

The operation may be done (1) with curette, (2) with forceps and curette (mixed method), or (3) with the electric curette (Chatellier, Rousseau). The operation with electro-curette has the disadvantage of requiring a complicated outfit.

After operating no dressings are to be used, especially no washing of any kind. Food should consist of iced milk and bouillon the first day; eggs, puddings, and cooked fruits may be allowed the second day; and by the third day ordinary diet.

There should also be mentioned the methods (1) of Chiari (per nasum), (2) removal by forceps in several sittings, and (3) curetting with the finger-nail.

In the new-born anæsthesia is not required; in the adult it is to be obtained by insufflating powdered cocaine and sugar of milk—equal parts.

Often adenoids are accompanied by hypertrophy of the faucial tonsils. These must be treated separately. Further, there may be hypertrophied turbinateds, spurs and deviations of the septum, etc. All these must receive appropriate treatment.

Properly speaking there is no recurrence of adenoids. Apparent recurrence is generally due to incomplete operation; true recurrence may occur in syphilitic, tubercular, or malignant tumours. As a rule improvement is immediate and marked, but in strumous cases it may be less so. In these one should carry out local treatment, consisting of painting the naso-pharynx with resorcin and glycerine, also general treatment (thermal, sea-air, etc.).

Amongst the results of adenoids the worst are deformities of the thorax and vertebral column. Redard obtained good results in such cases by treating them with a sort of respiratory gymnastics, consisting in expanding as much as possible the affected parts while the normal parts are held fixed. To overcome defects of speech, rational and methodical respiratory movements, voice culture, singing, declamation, etc., are to be used.

Lastly there are the tubercular adenoids. Of these there are two types: (1) bacillary adenoids (Lermoyez), *i.e.*, where the bacilli are found inside the tissues—very rare, only one to seventy-five cases; (2) bacilliferous adenoids, *i.e.*, where the bacilli are found on the surface of the growths (Dieulafoy)—one to five cases.

Although these growths tend to shrink with advancing years, they must not be left untreated; for while disappearing themselves they leave indelible traces behind.

M. GAREL (Lyon). *Hereditary Syphilis simulating Adenoid Vegetations.* Two cases.

The first case had been operated on by a colleague, and eight days later perforation of the palate was found.

The second case was a young girl with the typical fauces of adenoids. M. Garel refused to operate on account of a serious cardiac lesion. Two months later the breaking down of a gumma caused perforation of the palate.

Both these cases rapidly recovered under potassium iodide.

The speaker insisted on the importance of careful diagnosis in such cases, in order to save the patient an operation which, if not dangerous, was, at least, useless.

M. A. MARTIN (Paris). *Reflex Disturbances due to Hypertrophied Posterior Ends of the Inferior Turbinates.*

Apart from respiratory disturbances due to nasal obstruction, there are reflex troubles—(1) general (headaches, neuralgias); (2) local (tinnitus alone, tinnitus with diminished hearing power, nasal disturbances with tickling sensations of the posterior part of the nose). These are mostly due to the turbinated touching other parts, and can be relieved either by free cauterization, or by ablation of the posterior end of the turbinal.

M. M. BOULAY (Paris). *Epileptiform Crises and Hypertrophy of the Tonsils.*

Amongst the numerous nervous affections, local or remote (cough, glottic spasm, asthma, headache, etc.), which may accompany the various lesions of the nose and pharynx, particularly hypertrophy of the pharyngeal tonsil, the rarest are the convulsive phenomena. The following case is a typical example of epileptiform crises accompanying large tonsils. The patient was a boy, twelve years old, who had suffered for two years from nocturnal crises, with the following characteristics: sudden awakening with anxiety, tingling of tongue, loss of consciousness, and convulsions of tongue, lips, face, and often of the four limbs, with embarrassed respiration and threatened asphyxia: the whole attack lasting five to ten minutes. The child had immense tonsils and adenoids. From the day on which the tonsils were removed the attacks ceased and never returned; the adenoids were removed later.

M. LUBET-BARBON. *Mastoid Abscess without Suppuration of the Tympanum.*

Mastoid abscess is generally consecutive to tympanic suppuration. Cases, however, occur in which either there has been no such suppuration, or else it has been so slight as to pass unnoticed. These abscesses are distinguished by their slow insidious progress, seeming to call for no treatment. Various complications may arise, quite without the surgeon's knowledge, such as congestion-abscesses, cerebral abscess, meningitis, or general infection. Once these have started local treatment is of no avail.

In contrast to mastoid abscess following tympanic suppuration, these abscesses are situated in the cells of the point of the mastoid process. The antrum remains unaffected, or its mucous membrane is simply thickened and granular. Treatment, consequently, must consist in the systematic opening of the cells of the point of the process.

M. E. J. MOURE (Bordeaux). *On Certain Anomalies of the Mastoid Region.*

The speaker pointed out that anatomical investigations on ordinary normal temporals gave no exact information as to the position of antrum, etc., in pathological conditions. Eburnation of the mastoid was much more frequent than was generally supposed in old cases of otorrhœa. The antrum itself, often greatly reduced in size, was often not at all in its proper position. In thirty-four cases opened during the last fifteen months M. Moure had found the mastoid eburnated twenty-five times. In four cases there was, properly speaking, no apophysis; it was replaced by the lateral sinus, which was opened once.

M. ESCAT (Toulouse). *Congenital Stenosis of the Nasal Fossæ and of the Naso-Pharynx simulating the Symptoms of Adenoids.*

Three cases are related—the first a man of twenty-two years, the second a child of six, the third a man of fifty-six—all presenting in a marked degree the symptoms and signs of adenoid vegetations. There were no adenoids present, but atresia of the nasal fossæ and naso-pharynx. One finds such patients microcephalic, or, more frequently, dolichocephalic. Hearing is not so much affected as in cases of adenoids, the deafness being probably central. Mental debility, rather than aprosexia, is present. These cases show that a diagnosis of adenoids must not be made from symptoms alone, but only after careful post-rhinoscopic examination.

MM. LANNOIS and JABOULAY (Lyon). *Hemianopsia in a Case of Otitic Cerebral Abscess. History of a Case.*

The patient, who had had otorrhœa for twenty-five years, suddenly presented symptoms of cerebral abscess (vertigo, staggering, intense cephalalgia, right hemiparesis); further, there were word blindness and conduction aphasia—no word deafness; lastly, homonymous right lateral hemianopsia, with retention of the pupillary reflex. The seat of the abscess was thus very precisely indicated.

The mastoid was opened, the skull trephined, and punctures made into the brain—at first without effect (probably because only a needle was used), but later bringing away a large quantity of pus. The autopsy confirmed the diagnosis of abscess of the occipital lobe.

The speakers remarked that aphasia from otitic cerebral abscess was most frequently a "conduction aphasia," and that a case of pure motor aphasia did not exist. They also insisted on the importance of seeking for some such aid to localization as hemianopsia in all cases of cerebral abscess.

M. LERMOYEZ. *Chronic Anæmia of the Labyrinth; the Nitrite of Amyl Test.*

The semeiology of the internal ear is still far from complete, specially as regards the determination of the exact seat and nature of labyrinthine lesions. It will be perfected no doubt chiefly by the anatomico-clinical method, which has already given such excellent results in the hands of Ménière père, Moos and Bezold. The following purely clinical observation is sufficiently precise and simple to help in the right direction.

The patient was a man of forty-five, diabetic, fat, alcoholic, who four

years ago, in consequence of some gastro-hepatic disturbance, was suddenly put on an extremely strict diet. Ear affections soon appeared—vertigo, tinnitus, and deafness gradually increasing till the patient was no longer fit for active life. When I first saw this man I found, besides well-marked median dry catarrh, a very pronounced labyrinthine insufficiency. Attributing this to a chronic labyrinthine hyperæmia, due to the stomach condition, I treated accordingly, with the effect of increasing all the symptoms. At last, struck with the fact that the patient heard better after a meal, and was rendered almost totally deaf for days by a strong purgative, I began to suspect (that, not congestion, but rather anæmia of the labyrinth, must be the cause of all the ear symptoms. To confirm this diagnosis I made the patient inhale a few drops of amyl nitrite. Immediately the tinnitus ceased, and the hearing power for low voice increased from twenty centimètres to thirty-seven centimètres. I then prescribed a prolonged course of trinitrine, and one month later the hearing power had increased from thirty-nine centimètres to two mètres.

It thus appears that there are two forms of circulatory disturbance of the labyrinth, viz., hyperæmia and anæmia, having symptoms so much alike that none of the classical signs suffice for a differential diagnosis. But the nitrite of amyl test is decisive.

Let the patient inhale a few minims of nitrite of amyl. If there is congestion of the labyrinth the tinnitus and deafness will increase considerably; if anæmia of the labyrinth, the tinnitus will diminish and the hearing power increase at once, as if an air douche had been given. There is no danger in such a use of amyl nitrite. Unpleasant effects, however, are produced by the repeated use of the drug—besides, it very soon loses its efficacy. I therefore prefer trinitrine (as used by Huchard in the treatment of angina pectoris), either combined with the treatment of the pathological cause of the anæmia, when that can be discovered, or alone, in the very much larger number of cases in which the cause remains unknown.

M. LACORRET (Toulouse). *Post-Diphtheritic Pseudo-Hypertrophy of the Tonsils.*

A child, four years old, had been treated for diphtheria with an injection of serum. After the inflammatory symptoms had passed off completely there occurred an enormous swelling of the tonsils (so that they met in the middle line), pale, and of a wooden hardness. There were certain general symptoms of leukæmia. Appropriate treatment was instituted. The elimination of the diphtheritic poison cleared off these symptoms and induced atrophy of the tonsils.

M. P. BONNER. *A form of Deafness; a Genital Reflex.*

There is a form of deafness which at times may become almost total, but which, when the patient's attention is aroused, may completely disappear, thus showing the complete integrity of the ear—*i.e.*, the peripheral part of the organ of hearing. I have seen three such cases: the first, a boy with inguinal hernia; the second, a boy, a monorchid; and the third, a young girl who masturbated. There were no nervous stigmata and no hereditary blemish.

Arthur J. Hutchison (Trans.).

HARVEIAN SOCIETY OF LONDON.

Meeting, April 16th, 1896. ("Brit. Med. Journ.," May 2. 1896.)

J. W. DREW, M.R.C.S., *in the Chair.*

Swellings of the Parotid.

Mr. RAYMOND JOHNSON read a paper on an unusual form of swelling of the parotid, illustrated by five cases—two in adults, three in children. The essential feature was swelling and induration of one parotid gland, of rapid onset (often occurring during a meal, and persisting for several weeks. Pain during mastication was considerable, and in one instance redness and œdema occurred. In one case recurrent attacks took place during two or three years, commencing always in the socia parotidis. The view was expressed that the swelling was caused by blocking of Stenson's duct, due to inflammation of its lining: a view which was supported by the fact that in two cases pressure on the swollen gland produced an escape of ropy mucus from the orifice, followed by a free flow of saliva.

Dr. COODE ADAMS suggested the possibility that the swelling was of reflex origin. In the dog arrest of salivary secretion took place if the intestines were handled: and, referring to Stephen Paget's work, he suggested that many so-called cases of mumps were due to reflex hyperæmia, the result of intestinal indigestion.

Dr. DUNDAS GRANT, remarking on the rapid improvement in one of the cases after the application of liniments of potassium iodide, related a similar experience in a case of suppurative parotitis. He had observed that in mumps, pilocarpin influenced the course of the disease most favourably, in contradistinction to belladonna, and that the former drug was the best remedy for labyrinthine effusion occurring in this disease.

Prognosis in Chronic Non-Suppurative Catarrh of the Middle Ear.

Dr. WILLIAM HILL excluded from the discussion cases of only a few months' standing, and of deafness in children and young persons. In adults permanent damage was likely to occur where catarrh had existed for six months. After dealing briefly with the more obvious factors which influenced prognosis, the author said that he considered a sudden onset, particularly if due to nasal or pharyngeal catarrh, as a favourable point in the history. Exceptions to this rule were tympanic disease of syphilitic origin, or extensive destruction produced by exanthemata. When the deafness was due to throat and nose lesions, provided the damage to the tympanum was not great, the outlook was good if the cause could be removed, even when on account of want of ventilation from the blocked tube the impairment of hearing might be considerable; and even in long-standing cases the result was occasionally gratifying. Chronic cases of gouty, rheumatic, and malarial origin usually resisted treatment, especially when salicin, quinine, and alcohol had been taken in excess. Deafness of dental origin must come under treatment early to obtain a cure. After

mentioning the unfavourable character of cases of sclerosis, and the favourable import of fluctuation in the extent of deafness, the author spoke of the indications to be derived from the results of inflation, etc. He considered that the prognostic value of tinnitus, paracusis Willisii, and vertigo had been over-estimated.

Dr. DUNDAS GRANT expressed his accord with Dr. Hill's views. In his experience prognosis was less favourable in females than in males.

Ernest Waggett.

CONGRESS FÜR INNERE MEDICIN IN WIESBADEN.

April 8th to 11th, 1896.

Therapeutic Application of Thyroid Gland.

EWALD (Berlin). Baumann's thyro-iodine is a great physiological step, and is a substance which produces most remarkable effects. Notkin's conclusions that the pathological effects of thyroidectomy are produced by accumulation of toxic albuminoid substances is not proved. With Fränkel's thyro-antitoxin one is able to cure thyroidectomized animals. Thyro-iodine alone will not antagonize the effects of thyroidectomy, but by thyroiden this effect can be obtained. The results of using thyroid gland are increase of secretion and excretion, and in subjective symptoms, such as palpitation, anorexia, etc. In no case has iodine intoxication been observed. In some cases acceleration of respiration and erythematia have been observed. Glycosuria and albuminuria have also been noticed. In cases of myxœdema and cretinism influenced by thyroid treatment the latter must be intermittent, and never can be totally left off. Concerning Basedow's disease, we have not yet certain opinions. The author concludes that thyroid gland is a potent remedy whose effects are not yet sufficiently understood.

BRUNS (Tübingen). Its greatest effect is manifest in cases of extirpated goîtres. Schiff has found that by implanation of thyroid glands in the abdomen of thyroidectomized animals the symptoms of cachexia strumipriva can be prevented. Then followed the subcutaneous and external application of the gland in cases of myxœdema with better results. It is now only administered internally. Good results are obtained in cretinism and goitre. In three hundred cases the diminution of the circumference of the goitre was one to eight centimètres. Only the hyperplastic form of goitre can be successfully treated. In the greater proportion recurrence is observed, which makes it necessary to repeat the treatment. The effect of Baumann's thyro-iodine shows that iodine treatment has the same effect as thyroid treatment: the thyro-iodine contains the iodine in the natural form, and therefore gives results in small doses. With this treatment the author made experiments on dogs who had goîtres. He has found that the colloid degenerated gland is changed after treatment to normal thyroid tissue. It is the only example in physiology that by application of the secretion of a gland the hyperplastic gland is retransformed to normal tissue.

MAGNUS-LEVY has observed increase of secretion and excretion. The consumption of oxygen increased in one case fifteen per cent. Also in normal men the effect of the use of thyroid gland is the same. He had seen no good results in obesity.

BLACKSTEIN has observed that glycosuria in diabetic patients was increased by thyroid treatment, but that the general health was improved. The decrease of fat must be accredited to the influence of the gland on the glycogen of the liver.

HAUSEMANN remarks that struma in Basedow's disease has another histological character than the usual hyperplastic struma.

JULIUS SCHMIDT obtained good results in cases of dwarfs without myxœdema.

MIKOWSKY has made experiments consisting in extirpation of thyroid and pancreatic gland. In his cases glycosuria arose.

HEUBNER has applied thyroid feeding in cases of rachitis. He has observed improvement of health without influencing the disease itself.

SCHULTZE has applied it in cases of tetany with good results; in cases of acromegaly without any result.

SCHUSTER recommends Baumann's thyro-iodine, because it has no disagreeable influence on the heart.

GOTTLIEB has found that the substances produced by Drechsel and Kocher contain no iodine at all. In spite of that, they are as efficacious as thyro-iodine. He therefore believes that the efficacious substance is an albuminate.

REHN has treated cases of cretinism with good result.

FAKSCH has obtained good results in myxœdema and cretinism.

NOORDEN has often observed glycosuria in thyroid feeding. In Basedow's disease this treatment gives no result.

THOMAS treated a child with goitre and attacks of suffocation with the best result.

ROSENFELD had seen sometimes *post mortem* in diabetic patients unusual changes in the thyroid gland.

MULLER had seen progression in Basedow's disease during the treatment with thyroid gland. After ceasing the treatment he observed remarkable improvement.

ROOS prefers thyro-iodine to other specimens of the gland.

CAST remarked that in obese patients the gland is used without medical advice. He had seen disagreeable effects.

SENATOR confirmed the abuse of this treatment.

Michael.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

March 13th. ("Brit. Med. Journ.," April 4.)

Stenosis of Trachea and Bronchi due to Syphilis.

Mr. F. A. NIXON exhibited a specimen showing a large gummatous mass surrounding the bronchi, and compressing the trachea to the extent

that the lumen was diminished to the size of a No. 4 catheter. Anti-syphilitic treatment produced no amelioration of symptoms, and the patient was slowly strangled by contraction of the mass during seven weeks. The larynx was healthy.

Dr. ROBERT WOODS had examined the patient and inspected the trachea as far down as the eighth ring, but could not make out the obstruction.

Dr. MCWEENEY said that the tumour consisted of lymphatic gland tissue, caseous in the centre and exhibiting giant cells and a considerable amount of fibrous tissue. He considered the mass to be gummatous.

Ernest Waggett.

THE AUSTRIAN OTOLOGICAL SOCIETY.

Meeting, February 25th, 1896. ("Monatsschrift für Ohrenheilkunde, March 1896.")

Dr. KAUFMANN. *A Case of Peri-Sinusal Abscess with Pyæmia cured by Operation.*

A girl, aged twelve, who had suffered for several years with ear disease, became affected with rigors of about half an hour's duration. On the 22nd January and on the two following days they recurred, and unconsciousness and vomiting supervened. There was loss of sleep, intense headache, and vertigo. She was taken into Prof. Politzer's wards in a somnolent condition; her temperature was 38.5; she had repeated vomiting. The right ear was normal; the meatus of the left ear was filled with thick offensive pus, and it was very narrow, so that the structures of the middle ear could not be recognized. The soft parts over the mastoid were normal, but at the point there was a certain amount of tenderness, as also in the region immediately below. The radical operation was at once proceeded with. The mastoid process was found hyperæmic, and at a moderate depth pus was met with in considerable quantity, along with moist, dirty, grey-green, cholesteatomatous masses. After a thorough clearance of the granulation and cholesteatomatous tissue in the attic and middle ear, the sinus was exposed in its whole course in the temporal bone. Around it was found thick pus, the wall of the channel was discoloured, but fluid blood was distinctly demonstrated in the interior. The sinus was therefore not opened; the posterior wall of the meatus was covered by the usual plastic proceeding, and an iodoform gauze bandage was applied. Next day the temperature was down to 37.9, there were no rigors, and steady and rapid improvement took place.

Dr. GOMPERTZ. *Congenital Abnormality of the Pharyngeal Orifices of the Tubes and Diverticulum in the Roof of the Pharynx.*

This was a patient aged twenty-three, and otherwise normally constructed. Both tubal orifices projected well into the naso-pharynx. From the upper part of each a ridge extended upwards to the roof of the pharynx, where both joined together and formed a sort of arch. It

appeared to consist of the same tissue as the tubal swelling. On the one side it seemed to roof over the choanæ, and behind it it left a kind of cavity. There had been no operative interference, and no evidence of syphilis; therefore it was looked upon as congenital.

Prof. POLITZER. *Osseous Defect in the Outer Wall of the Attic.*

The apertures in the attic remaining after the total destruction of the membrane of Shrapnell have been explained by some as due to the separation of the bone from its nourishing periosteum. This was possible only for the lower thin margin, but not for the thick upper part, which was well supplied by vessels from above. Wall's view, that a primary purulent osteitis of the tympanic margin was the cause of suppurative inflammation in the attic and its resulting caries, was not proved.

Prof. Politzer is of the opinion that after the laying bare of the margin of the notch of Rivini in the course of septic suppuration, pyogenic and saprophytic bacteria make their way into the cavities of the bone and lead to its destruction. The longer the suppuration lasts the greater is the extent to which the bone breaks away. In some cases, therefore, we find small, and in other cases very large, osseous defects after healing has taken place.

Prof. Politzer demonstrated the following preparations:—

1. A preparation from a subject aged seventy-five. Drum membrane entire. Shrapnell's membrane quite destroyed. Above the short process a pea-sized defect in the bone of the outer wall of the attic, through which a cholesteatoma had made its way from the meatus behind the bodies of the malleus and incus into the tympanum. In the deep parts of the attic there was a branched connective tissue membrane.

2. A preparation from a subject aged eighty-eight. The posterior half of the membrane was destroyed: the anterior, thickened, was attached to the malleus, and in contact with the inner wall of the tympanum. Above the short process there was a large irregular defect in the bone, which extended into a part of the meatus, and exposed the mastoid antrum. There were dirty white cholesteatomatous masses in the attic and antrum, and the tympanic orifice of the tube was closed by connective tissue.

3. A preparation from an unknown subject with concave indrawing of the membrane, which adhered to the inner wall of the tympanum. There were extensive defects of the bone in the outer attic, and through these the head of the malleus could be seen freely exposed. Similar appearances, in which the body of the incus was absent, had been shown by Gruber and Gompertz.

4. A preparation with extreme thickening and pigmentation of the membrane. There was a defect in the wall of the attic, loss of the incus and head of the malleus.

5. Preparation from a tuberculous subject with carious destruction of the wall of the attic and of the tegmen tympani. There were numerous perforations through the dura mater, and death took place from meningitis.

6. Decalcified section through the tympanic cavity from a patient

aged thirteen, who had died of acute pleurisy. There was destruction of the membrane of Shrapnell, and of a portion of the wall of the attic, adhesion between the head of the malleus and the tegmen tympani, and between the tympanic membrane and the inner wall of the cavity, as had been observed by Hartmann in cases of Shrapnellian perforation.

Prof. GRUBER drew attention to the fact that some years previously he had, in the "Wien. Allgemeine Med. Zeit.," published a report on secondary dilatations in the temporal bone, with his theory as to the mode of their formation. He specially remarked that at the upper part of the inner margin of the outer meatus the drum membrane derived its tissues directly from the soft parts of the meatus, and that in this situation there was no annulus cartilagineus: that the blood vessels were more pronounced, and, therefore, also the structures of that part were in general more disposed to severe inflammation, and the bone was not protected by the annulus cartilagineus as it is in other parts, and was therefore also more easily broken down by suppuration. As a cause predisposing to infection of the antrum, he pointed to the structure of the portion of the squamous bone which joined the mastoid, which consisted of a more diploetic substance, and in which there were demonstrable cell spaces even immediately after birth, in which infection through the invasion of microbes could easily take place, and a breaking down of the bone in that way so much the more easily occur.

DR. ALOIS KREIDL. *Demonstration of a Cat in which both Acoustic Nerves had been destroyed a year previously according to a Modification of Ewald's Method.*

The operation was effected in such a way that after the bulla was laid open the acoustic nerves, along with the facial, were destroyed by means of a Paquelin's cautery introduced from the foramen rotundum through into the internal auditory meatus. When the auditory nerve is being destroyed there is observed during the operation an outflow of cerebro-spinal fluid and horizontal nystagmus. At the end of a year the animal had the following symptoms, which were demonstrated: feeling its way about, audible (cl) gait, persistent movements of the head, awkwardness in seizing its food, in running, and various disturbances of equilibrium, and loss of the galvanic reaction. Dr. Kreidl attributed these disturbances to the elimination of the organs of equilibrium in the internal ear.

DR. FAET. *Post-mortem appearances in a Case of Ménière's Disease due to Leukæmia.*

This was a day labourer, aged sixty-six, who had never been seriously ill up to the winter of 1894, but at this time began to complain of headache, weakness, and extreme dulness. In June, 1895, he became unconscious after severe vertigo and tinnitus, and when he came to himself again found his hearing almost entirely gone. It was, however, only after fourteen days that a complete loss of hearing took place. Up to that time the patient was in bed, was frequently affected with attacks of vertigo, and in July, 1895, he was admitted into the hospital. A high degree of myelo-lienal leukæmia was diagnosed. [2,000,000 red to

600,050 of white blood corpuscles, about 1-4th, numerous single nucleated granular red blood corpuscles, enormous tumour of the spleen, enlarged liver, and extensive hæmatomata.] Inspection of the ear showed the drum membrane strongly indrawn on both sides, opaque, and with diminished light reflex. A tuning-fork, C^2 , was not heard by the bones. In front of the left ear, and on the left mastoid process, C^2 , C^1 , and C were not heard, and in front of the right ear only the fork C^2 , C^1 , and C when very strongly struck, and then only for a much shortened time, while through the bones they were not heard at all. Very loud speech was only heard in immediate contiguity to the right ear, and on the left side there was complete deafness. A galvanic current of from fifteen to twenty milliamperes failed to induce giddiness. Death took place on September 8th, and on section there was found myelolial leukhæmia, with suppurating leukhæmic hæmatomata. Both temporal bones and the cerebral trunk were taken over for examination by Drs. Alt and Pineles.

These parts were treated according to the Weigert-Pal method, and showed the following changes:—In the intra-medullary course of the auditory nerve, both in the lateral and in the median root, there were in numerous places leukhæmic small-celled infiltrations, some minute, others very large. In particular the point of exit of the auditory nerve, where the two roots joined together, was extremely infiltrated, and the pia mater was slightly thickened as well as infiltrated with small cells. Moderate degeneration of the fibres of the nerve were here and there recognizable. The auditory nuclei, the posterior corpora quadrigemina, and the cerebellum showed no pathological changes: there were nowhere either hæmorrhages or remains of such.

The middle ear was absolutely normal; the appearance of the labyrinth, as verified by Drs. Kaufmann, Gruber, Politzer, and Weichselbaum, was absolutely negative. There was no evidence of such leukhæmic changes in the labyrinth as had hitherto been described, though very minute alterations could not be absolutely excluded on account of the extreme decalcification of the preparation. In the cases which have hitherto been published, the pathological changes were found either in the labyrinth (Politzer, Steinberg, etc.) or the middle ear (Gradenigo). As regards changes in the auditory nerve there is no mention in these examinations, doubtless because no examination of the nerve—or at least of its cerebral origin—was made. This is therefore the first case in which leukhæmic infiltration of the auditory nerve has been found.

Seeing that in the whole of the literature no case of isolated auditory nerve affection has been described as giving rise to Ménière's disease, this case may be looked upon as unique in this respect. The fact that currents of from fifteen to twenty milliamperes produced no galvanic vertigo in the patient would have to be explained, according to Polak's experiments, as due to a throwing out of gear of the co-ordinating apparatus.

Prof. GRUBER insisted that in the numerous sections which the reader had placed before him for examination no trace of Cortis's organ was present. Among all those which he had examined during his long

experience in which the labyrinth had been developed, he always found at least a trace of Corti's organ ; but in these preparations the part was as if shaved away, leaving no traces, while even in the capsule of the labyrinth no abnormalities were to be found. The whole thing gave him the impression that in the decalcification Corti's organ had been destroyed, and he thought it was unsafe to infer from the appearances found that the leukaemic infiltration had in this case affected the auditory nerve alone, and had spared the structures of the labyrinth. At the same time the appearances in the auditory nerve were of the greatest interest.

Dr. ALT replied that he attached the greatest importance to the leukaemic infiltration of the auditory nerve, and he had brought forward as a subsidiary matter the question as to whether this alone was sufficient to give rise to Ménière's complex of symptoms.

Dundas Grant.

SOCIETY OF HUNGARIAN OTOLOGISTS AND LARYNGOLOGISTS.

Fourteenth Meeting, November 21st, 1895.

("Monats. für Ohrenheilkunde," February, 1896.)

Dr. ZWILLINGER. *Laryngeal Paralysis resulting from Disease at the Base of the Brain.*

The patient was brought before the meeting of the Royal Medical Society on October 26th as a case of syphilitic basilar meningitis, and the appearance of the larynx was shortly described. Although the interesting symptoms had somewhat diminished under treatment, there was still sufficient remaining to bring before the society. The patient was a serving man, aged thirty-five. In March, 1895, there came on right-sided facial paralysis, which persisted without improvement in spite of iodide of potassium and electricity. Further there was absence of hearing for the watch in the right ear. Syphilis was denied, but in 1880 two warts had been removed from his penis which had formed during the course of a blenorrhœa. In 1884 he had pains in the right arm, for which a plaster of Paris bandage was applied without effect, but they ceased after twenty-five inunctions of mercury. On the 17th of October of last year the patient complained of general constitutional disturbance and headache; he was also unable to move the right eye outwards; had double vision, hoarseness, and regurgitation of food. On investigation there was found to be abducent paralysis, paralysis of the pharynx and larynx, anæsthesia of the trigeminal and auditory nerves of the right side; sight was normal; the fundus of the eye, apart from venous hyperæmia, showed nothing unnatural. Syphilis of the base of the brain was diagnosed, and treatment with inunction instituted. After the fourth injection the more recent nerve paralysis began distinctly to diminish, and at the present moment the paralysis of the sixth and of the right

half of the palate has disappeared, and the laryngeal paralysis is distinctly less. At the first examination there was found paralysis of the right half of the palate and obliquity of the uvula. There was a diffuse redness of the palato-glossal arch, both on the right and left sides, and small epithelial erosions of the size of a pin's head. The right half of the larynx remained on phonation completely fixed, a slight movement of the right arytenoid cartilage being all that was seen. The vocal cord was concave and absolutely abducted. On phonation the left side moved freely and extended beyond the middle line. It could, therefore, be decided that there was complete paralysis of the muscles supplied by the right laryngeal nerve. Sensibility was intact: after the fourth innunction the right half of the larynx could move to a slight degree towards the middle line, and the arytenoid cartilage moved more freely than before. After the sixth or seventh injection the degree of mobility was greater, though still imperfect, and the closure of the glottis incomplete on account of the right vocal cord still remaining concave. The additional observation was made that the glottis occupied an oblique position.

This observation has considerable interest in relation to the innervation of the crico-thyroid muscle. It appears that the healthy vocal cord was on a higher plane than the paralyzed one. On the other hand, in phonation one is struck by the circumstance that the movement of the right side is not so prompt as that of the left. The right vocal cord does not yet undergo normal extension. When last seen the glottis was still somewhat oblique, and the voice slightly hoarse. The mobility and sensibility of the palate had become normal, and the patient had already had twenty-six innunctions.

Dr. NEMAI agreed with Dr. Zwillinger that the left vocal cord was healthy and the right one paralyzed, but as regards the difference in level he thought the healthy one was somewhat deeper and the paralyzed one somewhat higher. This circumstance agreed with experiments he had made upon animals, which indicated absolutely that it was the right crico-thyroid muscle which was paralyzed.

Dr. BÖKE was not quite certain with regard to the history, but he was unable to explain the facial paralysis in this case on the hypothesis of a central origin, because in central affections the facial paralysis affects the opposite side from the auditory paralysis. He was much more inclined to consider that there was a local process present in the ear which gave rise to the auditory paralysis, and he was of opinion that the facial paralysis was peripheral and not central.

Dr. KREPUSKA inquired whether the condition of the heart had been examined as regards retardation or irregularity of pulse. These clinical symptoms were of great importance in the study of a central disease. He thought it probable that there was some proliferation of tissue pressing upon the auditory and facial nerves where they ran side by side. The auditory anæsthesia was not complete. The patient suffered at the commencement from noises in the ear and became deaf in the right ear. At this moment he did not hear the watch at all. Weber was positive left, Rinné positive right, and the appearance of the tympanum absolutely

negative. With such symptoms, and with due recognition of the fact that the facial paralysis is on the same side, there was little doubt that the disease was situated where the seventh and eighth nerves run together—that is to say, between their exit from the medulla oblongata and the external extremity of the internal meatus. The simultaneous affection of the vagus nerve would indicate that the disease was not situated in the internal auditory meatus, but at the point of exit of the nerves from the medulla. These observations would require to be confirmed by the conditions found at an earlier stage and the course of the disease.

Dr. BÖKE mentioned that cases of syphilis of the brain had been published, in which exostoses and tophi exercised pressure upon the seventh and eighth nerves in their common course in the internal meatus.

Dr. SZENES thought that perhaps the disturbances of taste described in this case might indicate that the disease was situated near the periphery. He thought it unlikely that the disease would be in the cerebellum, where a tumour might cause disease of the auditory and facial nerves at one and the same place, because of the distinct improvement in the facial paralysis which had followed injections, although the auditory anæsthesia still persisted. The negative appearance of the tympanum would not exclude the possibility of a sclerotic process, which might gradually have led to the deafness.

Dr. ZWILLINGER agreed that the right crico-thyroid muscle was paralyzed, but he differed from Dr. NEMAI's opinion that the paralyzed cord lay on a higher level than the other one. He had followed the case from the beginning, and had seen it very frequently, so that he was in a better position to pronounce as to the difference in level, which had become less under treatment. He had attributed the deafness to a basilar origin, because the other paralyses were unquestionably of such.

Dr. NEMAI still insisting that the paralyzed vocal cord was the higher one, Dr. ZWILLINGER requested those present to examine the patient and decide upon this question; whereupon Drs. Irsai and Polliak expressed their opinion that the normal vocal cord was the higher of the two.

Dr. STIPANITS. *Removal of the Inferior Turbinated Body.*

An illustrative case was described. He generally uses a chisel—sometimes a bone forceps or scissors—and carries out his operation in the following way:—After irrigation of the nose with a weak solution of sublimate and anæsthetization with ten per cent. of cocaine the turbinal is removed, in whole or in part according to the necessity. Bleeding, which is slight, is checked during the operation by means of a solution of alumnol. After the operation the nose is plugged with strips of iodoform gauze, which are changed two or three times a day. Healing takes place in eight or ten days, even in cases in which portions of bone are removed. He carries out this operation in cases in which he wishes to reach a place which is inaccessible on account of the presence of the turbinal, especially in extreme hypertrophy of this body, when milder measures are unsuccessful, and where it is necessary to attain an immediate result. When an operation is necessary he is strongly opposed to the use of the galvano-

cautery, because he cannot see that in cases in which cauterization is applicable his operation is not applicable : and when he has to make a wound he considers it better surgery to do it with a sharp instrument than with a cautery, which, in the nose, causes a wound which cannot heal without suppuration. Further, he thinks it better practice to get the patient well in eight or ten days, even if the operation is more energetic, than to lengthen it out over two or three months. He claims the following advantages for his operation :—(1) The removal is radical, and its amount can be carefully checked ; (2) the patient is relieved from his trouble at one sitting ; (3) healing takes place with greater rapidity than after any other form of operation.

Dr. POLIAK thought that the operation was very seldom required—indeed, only in cases where the turbinated body prevented access to deeper parts. Even here there was a danger of the hæmorrhage concealing the field of operation, so that the whole proceeding cannot be carried out at once. Even in such cases he thought that the cold snare was more effective. In the treatment of hypertrophy the galvano-cautery would not be displaced by this operation, if only because, although it is necessary that the patient should have enough air through the nose, he must not have too much : and in the use of the chisel he was afraid that the nasal passage might be made too wide, and that certain morbid troubles might follow which could not be disregarded. He thought it a great disadvantage that after the operation the nose had to be plugged for several days.

Dr. STIPANITS replied that with the chisel he could open the nasal passage as much or as little as he liked.

Dr. NEMAI. *Laryngeal Cicatrices following Severe Tuberculous Destruction.*

The case demonstrated showed what a favourable course was sometimes taken by tubercle of the larynx. The pulmonary disease, which was of an advanced kind, had come to a standstill. The laryngoscope showed considerable loss of substance on the epiglottis and the right aryepiglottic fold, as also of the right vocal cord, which was not ulcerated but irregular. The losses of substance were such that the insufflation tube, or the brush, could be passed through them into the larynx. Their floor was throughout formed of firm cicatricial tissue. At the same time the right arytenoid cartilage was infiltrated, so that it could not be said that the tuberculous laryngitis was completely cured. The voice was hoarse, but otherwise fairly good ; there were no signs of syphilis ; and the larynx had been treated in the country by means of iodoform insufflation.

Dr. ZWILLINGER considered the prognosis of the case very unfavourable in spite of the cicatrization, because not only the arytenoid cartilage but the tissue surrounding it were infiltrated. It was interesting to observe that a part of the cartilage was lost—a condition which was seldom found in such tuberculous processes. The cicatrization was not a very uncommon event, and he had himself had a case of severe tuberculous infection of the epiglottis which was treated with iodoform and morphia insufflations, and settled down in about half a year.

Dr. SZENES. *Mastoid Caries following Influenza. Demonstration of the Patient.*

The patient was a schoolboy, aged fifteen, who took ill on the 5th of September with headache and general debility, and had a temperature of from 39 to 39.5. Next day there were severe pains in the upper part of the left ear, and on the following day also in the right one. On account of this Dr. Szenes was called to see the patient on the 8th of September. There was a clinical picture of acute median otitis, diffuse hyperæmia of the tympanic structures, which persisted in spite of the instillation of fifteen per cent. carbolic glycerine, and suppuration appeared next day in the right ear. Previous to this the patient had been somewhat delirious, but only for a short time. With the exception of Trousseau's lines there were no further symptoms of meningitis. The ears were syringed every two hours with a lysol solution: an ice-bag was applied to the head and to both ears. On the 12th September the pyrexia had quite disappeared. In spite of this the other symptoms of influenza, especially the bronchitis, persisted. On the 18th of September there was considerable dulness of hearing and bilateral otorrhœa. There were perforations in the postero-inferior segments of the tympanic membranes, but the mastoid processes were normal.

At the end of a month the patient was seen again. He reported that the otorrhœa from the right ear had stopped for three weeks, and that the hearing power had become normal. On the other hand the left mastoid region was red and swollen, and deeply in the left external meatus was seen a little thick pus, after the removal of which the perforation in the postero-inferior segment of the membrane was exposed. Ice applications were made to the left ear and the swelling diminished, but there still remained a slight discharge. The patient left off the applications, and on the 8th November the left mastoid was again swollen, and the ice applications brought about no diminution of it. The patient was therefore taken into hospital for purposes of operation.

On admission the left auricle projected somewhat forward; the epidermis of the swollen mastoid was reddened, and in the middle of the swelling there was a fluctuating surface; and percussion, as well as Okuneff's auscultation method, indicated that the mastoid process was diseased in almost its whole extent. Hearing power was normal on the right side, but on the left side for the watch it was *nil*; low-toned tuning-forks were only heard by bone conduction, high ones by air conduction; also Weber was positive, Rinné on the left side negative.

After division of the soft parts, the periosteum, which was thickened and more adherent than normal, was raised with the elevator, and after the gouging away of the whole cortex there was found an extensive caries of the bone. The antrum contained a little thick pus and fungating granulations. After complete evacuation of the diseased parts the whole wound cavity was plugged with iodoform gauze, and the patient, after a somewhat restless night, next morning was so comfortable that he got out of bed. The first dressing was changed five days later; the ear was completely dry, and the hearing power so much improved that the watch-tick was perceptible at five centimetres. Rinné was positive for high-pitched

tuning-forks and negative for very deep ones only. On the 19th November the dressing was again changed, and the boy was made an out-patient. When shown to the society he felt quite well; his appearance became better from day to day, and there was no doubt he would be well in a few weeks. The enormous destruction of the mastoid bone showed how severe the effects of influenza might be.

The case showed that influenza might, so to speak, commence in the external meatus; and it was curious, if the tympanic disease was similar on both sides, that in spite of identical treatment one ear quickly recovered, whereas in the other the disease extended to the mastoid. Notwithstanding the further extension of the morbid process there was feverishness only in the first few days of illness. Before the operation there was tenderness as well as spontaneous pain in the left mastoid process, but after it the wound was free from tenderness even on firm pressure.

Dr. KREPUSKA'S experience had been that influenzal suppurative median otitis very seldom led to affections of the mastoid unless there had been some error in the treatment. It was to be noted that in the case described the retention of pus which had existed during the pause in treatment had given rise to the mastoid affection which called after some weeks for operative treatment.

Dr. BÖKE pointed out that in this case the origin of the trouble was to be attributed to influenza, which can cause otitis media and extend further, and the limits of this extension could never be determined. As a rule it confined itself to the tympanum, and only rarely extended to the antrum. His opinion was, that under proper treatment recovery in influenzal otitis could be attained without operation, and that in cases in which it extended to the antrum there had either been some neglect on the part of the patient or some error in treatment had been made. The results in this case were extremely satisfactory.

Dundas Grant (Trans. and Abs.,

SECOND PAN-AMERICAN MEDICAL CONGRESS.

To Meet in the City of Mexico on the 16th, 17th, 18th, and 19th of Nov., 1896.

ENROLMENT.

Art. 1. In order to be properly enrolled, each member of the Congress will pay to the Treasurer thereof, in the City of Mexico, the sum of five dollars gold.

GENERAL SESSIONS.

Art. 3. The opening session, which will be of a solemn character and presided over by the Supreme Authority of the nation, besides being attended by the members of the Congress, will also be attended by the members of scientific societies.

Art. 8. No discussions will be held in the general sessions.

SESSIONS OF THE SECTIONS.

Art. 9. These sessions will be held from 9 to 12 a.m. and from 3 to 5 p.m., in the places that may be designated by the Organizing Committee. They shall be presided over by the President of each section, alternating with the Vice-Presidents of each one of the nations that are represented in the respective sections.

PAPERS, EXTRACTS THEREOF, AND DISCUSSIONS IN THE SESSIONS OF THE SECTIONS.

Art. 15. All papers will be presented in writing.

Art. 16. Each author will forward to the Secretary of the Organizing Committee in the City of Mexico, and before the 1st day of August of the present year, an extract not exceeding 300 words of the paper to be presented by him. These extracts will be printed in English, French, and Spanish, and will be distributed to the members of the Congress before the session in which they are to be read.

Art. 17. No paper will be announced which is not accompanied by this extract; but the authors who comply with these conditions will have a right to have their work published intact in the "Transactions" of the Congress.

Art. 18. The reading of the papers in the sessions must not last more than twenty minutes; when the papers are so long that they cannot be read within that time, the authors will give extracts from them, either in writing or by speech; but they will be published intact in the "Transactions" of the Congress and in the language in which they have been written.

Art. 19. The extracts referred to in the preceding article will be delivered at the same time as the papers to the Secretary of the section to which they pertain.

Art. 20. The members of the Congress who may take part in the discussions in any section will present their speeches in writing at the termination of the sessions to the respective Secretaries of such sections, and they will also be published in the "Transactions."

Art. 21. The papers which have been announced for reading in the order of the day in each section will serve as subjects for discussion. In such discussions no speaker will be allowed to speak more than once and for five minutes; but the author of the paper under discussion will be allowed to reply, if he considers it necessary, in one sole speech, which will not go beyond ten minutes.

DR. MANUEL CARMONA Y VALLE.

DR. RAFAEL LAVISTA.

DR. EDUARDO LICÉAGA.

WESTERN OPHTHALMOLOGICAL, OTOLOGICAL,
LARYNGOLOGICAL, AND RHINOLOGICAL ASSOCIATION.

(AMERICA.)

THIS Society was founded on April 9th, in Kansas City, Mo. The following gentlemen were elected as officers for the ensuing year:—Dr. ADOLPH ALT, *President*; Drs. FRYER, PIPINO, and MARTINDALE, *Vice-Presidents*; Dr. DAYTON, *Treasurer*; Dr. HAL FOSTER, *Secretary*. After the meeting for general business numerous papers were read, and we trust to be able to give abstracts of them later; and we take the opportunity of wishing this new Society success. St. Louis, Mo., was selected as the place of meeting for 1897.

ABSTRACTS.

DIPHTHERIA, &C.

Blumenfeld (Bruck). — *Contribution to Serum Treatment of Diphtheria.*
"Wiener Klin. Woch.," 1896, No. 18.

OF two hundred and twenty-nine cases treated with serum twenty died—eight and three-quarters per cent.; of forty-eight cases treated with serum eleven died.
Michael.

Dräer (Konigsberg).—*Bacteriological and Clinical Diagnosis of Diphtheria.*
"Deutsche Med. Woch.," 1896, No. 18.

IN one hundred and ninety-three cases of clinical diphtheria Loeffler's bacillus was found in one hundred and fifteen. In fifty-two cases of angina the bacillus was found in nine. Experimental injection of animals is only performed in cases with pseudo-diphtheritic bacillus. Six out of twelve cases gave positive results.
Michael.

Flick, Lawrence F. (Philadelphia).—*Calomel as a Specific for Diphtheria.*
"Med. News," April 25, 1896.

THE author advocates the administration of calomel in minute doses—one sixty-eighth to one one-hundred-and-twentieth of a grain every fifteen minutes—in cases of diphtheria, keeping this up day and night until the disease has disappeared. The result in his hands has been exceptionally satisfactory, as since adopting this treatment, two years ago, he has not had a single fatal result or a serious complication. He concludes by remarking that he has not seen a very large number of cases.
StGeorge Reid.

Kassowitz (Wien).—*Statistics of Antitoxin Treatment.* "Wiener Klin. Woch.," 1896, No. 17.

ANSWER to Paltauf. The statistics of Trieste prove that the diphtheria mortality in this city has increased since the introduction of antitoxin. In spite of the fact that in nearly all cases this treatment is used, Trieste had in 1895 a mortality from

diphtheria of 17 per cent., Berlin 5.3 per cent., and Paris 1.7 per cent. The author concludes that it is not possible to use the statistics to prove the value of antitoxin. *Michael.*

Lahs (Marburg).—*Antitoxin Treatment.* "Marburg Illwrs," 1896.

THE author has treated diphtheria for fifteen years with chlorate of potash and hydrotherapy, and has not had a death during this time. He does not believe that the antitoxin has any great effect. If the experiences of practitioners and not only of clinicians were taken, it would be found that their mortality would be less than the fifteen per cent. obtained by antitoxin. *Michael.*

Martin, Sidney.—*Treatment of Diphtheria by Antitoxic Serum.* "The Clinical Journ.," April 15th and 29th, 1896.

SEVENTY-FIVE cases have been treated at University College Hospital in 1895. In sixty-five, out of seventy examined, the bacillus diphtherie was found. Intravenous injection was employed in two tracheotomy cases, and did well. Rashes occurred in fifty per cent. of the cases, and one patient had pain in the knee-joint and slight swelling of the wrists. In thirty-one pharyngeal cases the membrane disappeared in two to six days in seventeen cases, in eight cases in seven to ten days, in four in eleven to thirteen days, and in two it persisted for twenty-three days. The local treatment was to spray the throat every four hours; a solution of bicarbonate of soda (20 grs. to the ounce) and a corrosive sublimate solution (1—2000) being employed alternately. The total mortality, twenty-eight per cent., was lower than in the best of the previous four years, and in cases admitted before the fourth day it was only seventeen per cent.

More cases of paralysis may follow antitoxin treatment because more severe cases have been saved from death and life prolonged.

The lacillus may persist long after the membrane has disappeared, and in one case a pure cultivation was obtained from the throat thirty-five days after.

The dose of antitoxin should not be reckoned by the number of cubic centimètres injected, but by the number of normal units the serum contains. The total dose ought not to be less than 4000 normal units. It is important to inject the serum at the earliest possible opportunity, for, even if the case is not diphtheria, you can do no harm. *Middlemass Hunt.*

Paltauf (Wien).—*Remarks on the Case of Sudden Death of a Child following a Preventive Injection of Antitoxin.* "Wiener Klin. Woch.," 1896, No. 16.

SOME weeks ago the child of Prof. Langerhaus in Berlin suddenly died, after an injection of heilserum. The nurse of the child had a non-diphtheritic angina; the child died suddenly after a prophylactic injection given before the diagnosis was verified. The *post-mortem* examination showed no cause for the sudden death. The author does not believe there is any connection between the injection and the death. He reports the good results of the treatment, and believes it unjustifiable for the public press to imitate the public by such communications. *Michael.*

Rubens (Gelsenkirchen).—*Antitoxin and Calomel in Diphtheria.* "Therap. Monats.," 1896, No. 4.

THE author recommends combination of the heilserum treatment with internal use of calomel and brushing with Loewler's solution. *Michael.*

Soerensen (Copenhagen).—*Experiments with Serumtherapy in Diphtheria in the Bisgaard Hospital in Copenhagen.* "Ther. Monats.," March, 1896.

OF fifty-seven cases treated with serum seventeen died; of forty-six cases treated without serum fifteen died. The author gives details of the cases and concludes

that there was no difference with antitoxin. But hæmorrhagic nephritis was more frequent in the cases treated with serum, and paralysis and hæmorrhages are more often observed in the cases treated with serum. The croup cases treated with serum died without exception. Only the slight cases treated with it gave good results.
Michael.

Wartmann (St. Gallen).—*Diphtheria in the Canton St. Gallen.* "Courszbl. für Schweizer Aerzt.," 1896, No. 9.

THE author gives the statistics and concludes as follows: The diphtheria in the Canton St. Gallen shows a remarkable increase, especially in the city of St. Gallen. Severe epidemics are rare; the disease has, as in Basel, an endemic character with progressing intensity. The mortality is not very high. The author hopes that by antitoxin treatment and by hygiene this will be improved.
Michael.

MOUTH AND PHARYNX.

Campbell, James T. (Chicago). — *Pharyngo-Mycosis Leptothrica.* "Med. News," April 4, 1896.

THE author refers to the numerous bacteria of the mouth and their beneficent character, but points out that the leptothrix buccalis under certain circumstances can give rise to the above disease in the pharynx. He describes the parts affected and the peculiar white, tough, adherent colonies standing out as excrescences on the mucous membrane, and points out for the purpose of differentiation the very slight constitutional disturbance accompanying the attack, the symptoms chiefly complained of being dryness and irritation in the throat, with slight irritable cough. He advocates the careful application of chromic acid on a fine probe to the interior of the crypts as the treatment he has found most satisfactory.
StGeorge Reid.

Clark, B. F. R. (Philadelphia).—*Hypertrophy of the Lingual Tonsil, with Report of Seven Cases.* "The Philadelphia Polyclinic," Mar. 28, 1896.

THE author deals with the history of the disease, and refers to its anatomical and physiological characteristics; he points out that it is a disease of adult life, and that sex seems to be an etiological factor, women suffering more frequently than men; that while it is often set up by exposure to cold or wet, he has not found that prolonged use of the voice, as in the case of public singers, renders them more susceptible. He recommends the application of glycerine of iodine, or iodide of potassium, and in obstinate cases cautery by chromic acid.
StGeorge Reid.

Kolpik, H.—*The Acute Retropharyngeal Abscess of Infancy and Childhood; Revised Classification and Treatment based on the Etiology.* "New York Med. Journ.," April 4, 1896.

THIS paper is founded upon seventy-six cases seen during a period of six years, and the anatomical relations of the parts and glandular distribution are reviewed. The author then classifies the abscesses as follows:—(1) Acute: (a) those pointing internally; (b) those pointing internally and externally; (c) those forming chiefly as an external tumour. (2) Chronic tuberculous. (3) Septic (as after scarlet fever), which burrow and may burst into one of the various structures of the neck. The term idiopathic is discarded, and Lallette's investigations as to the lymph glands in the retropharyngeal system are alluded to, and the connection between the

abscess and angina faucium pointed out; also of nasal affections and *la grippe*. The four chief micrococci found are streptococcus brevis (*a* and *b*) pharyngis, streptococcus longus (*a* and *b*) pharyngis. The disease is in its acute form one of infancy, and most frequent during the first two years of life. The same internal incision as that advocated by Bokai is advocated, and is certainly preferred by the author in most cases; external incision being used when there is deep suppuration of the cervical glands with primary abscess behind the pharynx. *R. Lake.*

Lape, Esther. — *Antiseptic Treatment of Scarlatinous Angina by Resorcin-Glycerine.* "Thèse de Paris," 1896.

THE author relates twenty-five cases of scarlatinous angina treated with much benefit by painting with glycerine and resorcin; one in ten to one in twenty. She employs that medicament in every case of angina, serious or mild. The application is not painful, not caustic, diminishes the duration of the angina, and prevents the secondary infectious complications of that disease. *A. Cartaz.*

Moreau. — *Contribution to the Study of Peripharyngeal Abscesses.* "Thèse de Paris," 1896.

EXHAUSTIVE description of the pharyngeal lymphatic glands, and of the symptoms of various forms of pharyngeal abscesses, retro or lateral. The author believes these abscesses are a phlegmonous adenitis, a consequence of direct local infection by tonsils or general infantile diseases. *A. Cartaz.*

Taylor, Seymour. — West London Medico-Chirurgical Society, March 6, 1896. "Brit. Med. Journ.," March 14, 1896.

THE author showed a man of thirty who had recovered from a severe attack of *Lutwig's Angina* under the use of potassium iodide. No incisions were necessary.

MR. BIDWELL showed a case of *Salivary (Parotid) Fistula* cured at a second attempt by setting up considerable suppuration.

MR. BIDWELL also showed an example of *Adenoma* situated near the tip of the tongue in a girl of fourteen. Surface vesicles, due to lymphatic obstruction, were to be observed. *Ernest Waggett.*

Tsergin (Kasan). — *Anastomosi in the Tongue.* "Archiv. für Anat. und Physiol.," 1894.

THE sympathetic nervous system gives fibres to the tongue by the superior cervical ganglion. The greater part of the vaso-constrictive fibres come from the hypoglossal nerve, the other from the plexus lingualis. *Michael.*

Waldvogel. — *Bacteriological and Pathologico-anatomical Researches of Infectious Pharyngo-Laryngitis.* Inaugural Dissertation, Göttingen, 1894.

THE author found in four cases examined that the inflammation was caused by streptococcus. *Michael.*

NOSE AND NASO-PHARYNX.

Baldewein, Rudolf (Rostock). — *The Rhinology of Hippocrates.* "Zeitschrift für Ohrenheilk.," Bd. 28, Heft 2.

THE author has collected from the works of Hippocrates all remarks relative to rhinological questions, as well as anatomical, pathological, and therapeutical. He has found that where the author was obliged to make hypotheses, errors were

frequent; but concerning the diseases of visible parts, we find exact clinical observation and an admirable therapy. The exact descriptions of different forms of polypus show the author knew of hypertrophy, of deviations, and of inucous polypi. For removing the neoplasms he had used both ligature and the sponge method known under Voltolini's name. The methods of operation are illustrated by instructive woodcuts. Also, fractures of the nasal bones are treated by methods similar to the most modern.

Michael.

Laurens, G.—*Nasal Lesions and Ocular Reflexes*. "Ann. d'Oculistique," April, 1895.

GENERAL review, in which Laurens explains the various reflex manifestations of the eye due to nasal disease.

1. Reflex sensory troubles, general or special (neuralgia, photophobia, amblyopia).

2. Troubles of excito-sensory nerves through irritation of the nasal branch of the trigeminal (lachrymation, epiphora).

3. Reflex disorders of motion (blepharospasmod, strabismus, asthenopia).

4. Nutritive and vaso-motor disorders in divers parts of the eye (conjunctivitis, iritis, glaucoma, etc.).

He discusses the pathogenic explanation of these disorders—the nervous reflex theory adopted by Hack and Berger, and the circulatory by Ziem. He himself believes that in some cases the troubles must be the result of secondary microbic infection.

A. Cartaz.

Myles, R. Cunningham (New York).—*Disease of the Accessory Nasal Sinuses, with Suggestions regarding their Treatment*. "Med. News," Mar. 28, 1896.

THE article deals with the difficulty of diagnosis in these cases and refers to the valuable aid given by the electric lamp. The author points out the importance of recognizing the altered character of the secretion poured out by the cells and its position, as indicating the diseased area; he advises irrigation at first through the natural openings, but where there is a considerable secretion of offensive pus recommends that a free artificial opening should be made without delay. He classifies the pathological conditions met with under the head of catarrhal, polypoid, odontic periostitis, atrophic rhinitis and syphilitic, and deals with the treatment of each form, consisting principally of cleansing, antiseptic drainage, curetting, and packing, and concludes by giving the history of twenty cases which had come under his observation.

StGeorge Reid.

Skier.—*Researches on Deviation of the Nasal Septum*. Inaugural Dissertation, Rostock, 1895.

REPORT on the examination of one hundred and seventy-two skulls of the Rostock anatomical collection. The results confirm those of Zuckerkandl.

Michael.

Tissier, P.—*Nasal Syphilis*. "Gaz. des Hôp.," Feb. 15, 1896.

GENERAL and critical review. The author studies the syphilitic manifestations of the skin, the mucous membrane, primary, secondary, and tertiary lesions, and the various forms of hereditary syphilis, of early or late development.

A. Cartaz.

Wright, G. A.—*On Certain "Dermoid" Cysts*. "Brit. Med. Journ.," April 18, 1896.

THE author draws attention to dermoid cysts containing hair, which occur about the bridge of the nose in the middle line. He also describes two cases in which ulceration [tubercular] was found associated with auricular fistulæ.

Ernest Waggett.

LARYNX.

Bergengrun.—*A Case of Diaphragm in the Larynx.* Meeting of the Medical Society of Riga, Oct. 4, 1895.

A DIAPHRAGM occluding nearly the whole larynx in a patient of forty-three. The neoplasm had been growing fifteen years. The author cut the membrane and treated it for a short time with Schroetter's tube, with a rapid cure. Syphilis could be excluded. The author believes that it was caused by congenital causes.

Michael.

Bianchi and Massei, F.—*A Case of Hystero-Traumatic Aphonia.* ("Safrà un Caso d'Afonia Istero-Traumática.") "Arch. Ital. di Lar.," Oct., 1895.

THE patient, a woman of about twenty-five, belonged to a neuropathic family, but had no personal history of nervous disease, and presented not the least manifestation of hysteria. Being subject for some time to hoarseness and interference with breathing, she consulted Massei, who found on the right vocal cord a tumour, which was removed without difficulty; but the patient, less preoccupied with the laryngeal tumour than the hoarseness, retained after the operation a complete aphonia. At the end of some months, and after cicatrization of the seat of the implantation of the growth, the latter reappeared and soon developed in an alarming manner. The aphonia was naturally attributed to the growth, and a second operation was performed; nevertheless the aphonia persisted. At this time the idea of the hysterical nature of the aphonia suggested itself; but as all the means employed (among others electricity) gave no result, Massei, with the concurrence of Prof. Bianchi, concluded that there was hystero-traumatic paralysis of the vocal cord. Without deluding themselves as to the difficulties of the treatment—naturally more serious than in a case of simple hysterical aphonia—they tried successively suggestion while awake, local and general faradization, galvanization of the vagi, the recurrences, and the vocal cord, hydropathy, etc.; but none of these methods caused the least improvement. Examination of the patient gave no basis for diagnosis; no paræsthesia, no contraction of visual field, no abolition of reflexes, such as one often meets with in hysteria. Moreover, the patient displayed none of the stigmata of hysteria on the moral side; she was quiet, moderately preoccupied, not desirous of speaking of her trouble, and in no way inclined to exaggeration.

It was then decided to give hypnotism a trial. The first attempt to put her to sleep having failed, a second hypnotic *séance* was held, and a perfect somnambulistic sleep was obtained, during which they suggested to the patient that she would speak aloud for one hour—a result which was in effect obtained. At the end of one hour the aphonia returned. During subsequent *séances* the suggestion referred to periods of time of increasing duration. Ultimately they made the suggestion that the cure was complete and final, as was realized in effect. Since then five months have passed without manifestation of aphonia or other nervous complications.

The authors arrive at the conclusion that a surgical operation may sometimes disclose a constitution hysterical and neuropathic, and bring on an hystero-traumatic neurosis where the psycho-physical stigmata of hysteria are absent. They insist that hypnotism may be turned to account in such a case, not merely as a therapeutic agent, but also with a view to diagnosis, by bringing to light the close analogy, if not the identity, which exists between hysteria and traumatic neuroses.

"Arch. Inter. Lar., Otol., and Rhinol." *M. M. (Waggett).*

Guément.—*Post-Influenzal Paralysis of the Velum, Pharynx, and Larynx.*

NOTES on the case of a man, aged fifty-five, who had a mild attack of influenza. Three weeks later, hoarseness, dysphonia, and dysphagia gradually appeared. The pharynx was paralyzed; reflexes abolished; the sensibility considerably diminished. In the larynx, paralysis of adductors complete on the left; incomplete on the right. The paralysis remained for three months, and was cured by electricity and internal treatment.

A. Cartaz.

Semon, Felix.—*A Clinical Lecture on Malignant Diseases of the Larynx.*
"Clinical Journ.," Feb. 26. 1896.

THE etiology of cancer of the larynx is involved in the same uncertainty as that of malignant disease elsewhere. It is always primary, never secondary or metastatic, or attacks the larynx by contiguity only. The reason of this is the lymphatics of the larynx do not freely anastomose with those of their neighbourhood. Sarcoma of the larynx is very rare; and of carcinomata, epithelioma is by far the most common. The male sex is infinitely more liable than the female, for some unknown reason. Smoking and professional voice-use do not account for the difference. Enormous majority of cases occur between forty and seventy years of age, the extremes in Dr. Semon's experience being twenty-six and eighty-three years of age.

In intrinsic disease the cords are most frequently first affected, and the one invariable symptom present is hoarseness. This may last for months, or even a year or more, without a single other symptom intervening. Pain does not depend on the disease *per se*, but on the implication of the sensory nerves, and may never occur up to the time of death. Slight and repeated hæmorrhage is very characteristic, but often there is none. Malignant disease may commence locally as a simple congestion, followed by tumefaction, or may assume at once the form of diffuse tumefaction in any part of the larynx. It may begin as a globular, sessile, nodulated mass, or present the characters of a simple papilloma or fibroma. To distinguish simple from malignant growths, remember the tendency of benign growths to localize themselves in the anterior parts of the cords, while malignant growths appear on the posterior parts, or on the interarytenoid fold, the epiglottis, or aryteno-epiglottidean folds. Again, in simple papilloma the apices are more or less rounded, while in malignant disease the individual projections of the growth are very much pointed, and the growth is much whiter in colour. Impaired mobility of the cord need not always be present in cancer, for the disease may be of a superficial character at first. The average duration of life in cancer of the larynx is between two and three years. The cases most favourable for operation are those in which there is a definite tumour of one cord. Thyrotomy, with removal of all the soft parts on the affected side, has yielded in Dr. Semon's hands fifty-eight per cent. of lasting cures. Where the disease is too advanced for thyrotomy, a part or half of the larynx must be extirpated. The cases most suitable for this operation are those in which the disease is situated on the front parts of the larynx. In cases which do not permit of radical operation early tracheotomy is the best palliative.

Middlemass Hunt.

Thompson, S. A. (Cincinnati).—*Sarcoma of the Larynx.* "Med. News," Mar. 28th, 1896.

THE final report of a case operated on in October, 1895. After a temporary improvement, recurrence took place in November, and at an operation undertaken for removal of the growth it was found impossible to remove all the affected glands, extending as they did under the sterno-clavicular articulation. The tumour was

removed and measured three inches by two in width. The patient rallied rapidly after the operation, but died on December 21st from recurrence in the lungs.

St George Reid.

THYROID, NECK, &c.

Baumann (Freiburg-i-Br.).—*On Thyro-iodine*. "Münchener Med. Woch.," 1896, No. 14.

THYRO-IODINE found by the author in thyroid glands can be obtained by treating the gland with sulphuric acid or by artificial peptonization. It is insoluble in water and ether, but soluble in alcohol and alkalis. It contains ten per cent. of iodine. An analogous specimen, iodo-gorgo-acid, has been found in Gorgonia, Carolina. Thyro-iodine is combined in the gland with albumen and globuline. Roos has used thyro-iodine in parenchymatous goitres, and has obtained the same results from the use of fresh thyroid gland, but more rapidly. The quantity of iodine found in a gland varies from three to seven and a half milligrammes. Experiments prove that iodine is necessary for the existence of the animal body, and it is possible also for the existence of plants; its presence is indispensable to sea plants, in which it is found in great quantities. The author also has found iodine in calf thymus. It seems that in enlarged thyroids, and especially in colloid goitres, the quantity of iodine is much less than normal.

Michael.

Fischer (Wien).—*The Relation between the Thyroid Gland and the Female Sexual Organs*. "Wiener Med. Woch.," 1896, Nos. 6, 7, and 8.

IN the time of the Roman Empire it was believed that relation existed between thyroid gland and female sexual organs, especially that the circumference of the neck increased after defloration. Goitre is often observed in females at the age of puberty. The thyroid gland increases and goitres most develop at this time. Also during menstruation a swelling of the gland is often observed. The same swelling has been observed by the author in pregnancy. Basedow's disease and myxœdema are influenced unfavourably by gravidity. By labour the gland sometimes increases, and if there is a goitre the swelling may be sufficient to necessitate artificial evacuation of the uterus. In puerperum the gland decreases, but during lactation it increases. By the climacteric, and by genital diseases, goitre and other thyroid diseases are diminished.

Michael.

Formanek and **Haskovec**.—*Contribution on the Function of the Thyroid Gland*. "Klinische Zeit. und Stenitfragen," 1895, Heft 3 and 4.

THE authors conclude: In cachexia strumipriva the number of the red corpuscles decrease, the leucocytes increase, and microcytes appear; the hæmoglobuline is diminished, and the iron in the organs is increased. The thyroid gland is an hæmopoetic organ.

Michael.

Gottlieb (Heidelberg).—*On the Effect of Thyroid Gland Preparations on Dogs after Removal of the Thyroid*. "Deutsche Med. Woch.," 1896, No. 15.

FEEDING with the gland substance or with thyroïden cures the pathologic symptoms after thyroidectomy. The animals fed with thyro-iodine died from eclampsia in spite of the treatment. The experiment shows that thyro-iodine

alone, which has such a great influence in many pathologic conditions, does not contain all the efficient substances of the gland. *Michael.*

Hennig (Konigsberg).—*On Thyro-iodine*. "Münchener Med. Woch.," 1896, No. 17.

THE author has used the medicament in obesity with good results. In cases of goitre and Basedow's disease the effect was not so constant. In some cases disagreeable effects are observed, as palpitation, headache, and other nervous symptoms; also, sometimes albuminuria and glycosuria. *Michael.*

Richter (Berlin).—*The Destruction of Albumen during the Use of Thyroid Tablets*. "Centralbl. für innere Med.," 1896, No. 3.

THE author made experiments in a healthy person, and found that it is possible to produce a decrease of the body weight in a few days without increased destruction of albumen. *Michael.*

E A R S.

Alderton, H. A. (Brooklyn, New York).—*The Upper Tone Limit in the Normal and Diseased Ear, as determined by the Galton Whistle*. "Arch. of Otol.," Jan., 1896.

It will be seen by the accompanying chart, which embodies Dr. Alderton's observations, that, either from the peculiarity of the actual instrument employed or from the nature of the cases, the deviations from the normal average Galton are much less than we frequently find.

Disease.	No. of Cases.	Average Age.	Average Galton.	Normal Galton at same Age.
Cerumen	11	31	1'58	1'51—'58
O. M. C. Sub.	6	24	1'55	1'37
O. M. C. A.	3	31	1'97	1'5
Tubal Catarrh.....	8	37	1'58	1'6
Tubal Obstr.	31	12	1'6	1'35
O. M. C. C.	56	30½	1'83	1'45
O. M. P. C.	18	25	2'02	1'37
O. M. P. R.	5	19	1'78	1'35
O. M. Resid.	22	19	1'97	1'35
Labyrinthine Anæmia	4	20	1'5	1'36
Neurasthenia	13	28	1'6	1'37
Hysteria	1	15	'8	1'35
Nerve	70	43	2'7	2'1
O. M. C. C. et Int.	198	41	2'98	1'95
O. M. Res. et Int.	28	40	3'09	1'8
O. M. P. C. et Int.	7	43	2'64	2'1
Tubal Obstr. et Int.	7	27	2'45	1'36½
O. M. C. Sub. et Int.	6	56	3'95	2'85

On comparing the average of the tone limit in the middle-ear diseases with that in the normal ear, there is a lowering of '18 to '55. Dr. Alderton finds that, in functional affections of the labyrinth, the upper tone limit is very slightly impaired, and may even be elevated in hyper-sensitive conditions; that in labyrinthine or nerve diseases the average upper-tone limit is '6 below the normal; further, that

combined middle and internal ear diseases are capable of producing a lower average upper-tone limit than internal ear diseases alone. Like others, he finds various discrepancies between the results given by Galton's whistle and the other methods, especially bone conduction. In some nerve cases there was great impairment of duration of bone conduction, especially for the higher forks, even with very good hearing for Galton's whistle; and he attributes this to an enervation or weakening of perceptive ability. [This is quite in accordance with the general conclusion arrived at by Gradenigo, that in functional, hysterical, or central affections, the loss of hearing is more marked in the middle than in the upper extremity of the range. This honest study of discrepancies is well worth attention, the general result of it being to emphasize the necessity for an intelligent comparison of the results of the various tests, and, above all, for a liberal discount in the case of minimal variations.]

Dundas Grant.

Gradenigo (Turin).—*On Thrombosis of the Lateral Sinus of Otitic Origin.* ("Sulla Trombosi Oritica del Seno Trasverso.") "Arch. Ital. di Otol.," 1893, p. 484.

THE following is a *résumé* of three extremely interesting cases which form the subject of this paper. The first patient, a man of fifty, presented a mastoid fistula of several months' duration, consecutive to an acute attack of otitis. On opening the antrum a perforation was found in the bone at the point of exit of the mastoid vein, which was thrombosed. The latter was opened, and an aseptic clot removed from its interior. Puncture made into the lateral sinus proved that the clot extended to that vessel, but the patient presenting no symptoms of pyæmia, no incision was made. The antrum being freely opened it was noticed that pus poured from the perforated internal wall, and that the stream was doubled in amount on the exercise of pressure over the muscles of the neck (mastoiditis of Bezold). A curved probe introduced through this perforation could be felt under the skin of the neck at a point eight centimètres below and behind the point of the mastoid. A counter opening was made at this level. Three weeks later, the drainage proving insufficient, the two incisions were united. It should be noted that at the time of the first operation, which gave opportunity for exploration of the lateral sinus and the portion of dura mater in its vicinity, no subdural abscess was found. Moreover, ophthalmoscopic examination made before operation gave a negative result. There was every reason, therefore, to expect a favourable issue to the case, but on the day following the second operation the patient was attacked with fever and restlessness, then sank into coma, and died the next day.

At the autopsy there was found purulent infiltration under the pia mater; a cerebellar abscess the size of a nut at the base of the left hemisphere under the neighbourhood of the bulb.

We have in this case a fresh example of cerebellar abscess of otitic origin, developing as a sequel to perforation of the posterior wall of the antrum at the level of the sigmoid groove. It much resembles one which my pupil, Dr. Anderódias, observed at my clinic, and which is recorded in No. 6 of these archives (1895).

We would merely remark that in Gradenigo's case the abscess, much smaller than in our case, remained completely latent, and by reason of its small dimensions and situation would have been very difficult to reach by operation. We find in this instance fresh confirmation of the opinion which we have already expressed, that, even in the absence of all intracranial symptoms, one ought to think of the possibility of cerebellar abscess when one finds on opening a mastoid a perforation of the postero-internal wall of the antrum which exposes the lateral sinus.

The second is that of a woman, fifty-five years of age, with right otorrhœa of twelve years' standing, who was already in an evident state of pyæmia (fever,

delirium, signs of pulmonary infarction) when he saw her for the first time. She soon succumbed, and at the autopsy there was found fungating osteitis of the tympano-mastoidean cavity, with a friable condition of the tegmen and the wall of the sigmoid groove; septic thrombosis of the lateral sinus reaching as far as the jugular vein, but not involving the sinus on the opposite side; subdural abscess in the region of the tegmen, and pulmonary infarction.

In the third case, that of a man of thirty-seven, the subject of acute purulent otitis of a month's, and of mastoiditis of eight days' duration, the complications of pyæmia, characterized only by great oscillations of temperature, could be controlled for a time.

The antrum was opened by operation, but fifteen days later the characteristics of the fever appearing to suggest sufficiently clearly a possible sinus phlebitis, this vessel was exposed, and presented the appearance of a hard cord of yellowish colour. It was opened, and its contents, composed of yellowish clots, were curetted until blood began to flow at both ends, which were plugged with iodoform gauze.

The fever subsided and cure followed.

The only symptoms observed in this case were extensive oscillations of temperature, stiffness of the neck, abundant perspiration, and rapid loss of strength. Rigors were absent, as well as the modifications to be looked for along the course of the jugular.

It is to be noticed that the thrombus did not extend low down, since on curettement being performed blood flowed from the lower as well as the upper end. We observe also that Gradenigo abstained from prophylactic ligation of the jugular, as recommended by other writers.

"Arch. Intern. Lar., Otol., and Rhinol." *Luc (Waggett).*

Method of Administration of Pilocarpin in Otology. "Arch. Inter. Lar., Otol., and Rhinol.," Jan. and Feb., 1896.

AN editorial note, recommending the following details of technique:—

Hypodermic injection of a one-in-a-hundred solution (equal parts of eau distil. de laurier-cerise and boiled water) of nitrate of pilocarpin. Injections to be made first thing in the morning on an empty stomach. Four milligrammes for the first dose; increasing the dose by one milligramme daily until the maximum, one centigramme, is reached. About fifteen injections are advised. Special arrangement should be made so that saliva may be ejected without the necessity of movement, which will uncover the person as the patient lies in bed.

The heart should be carefully watched, and signs of failure should be met with spartein, digitaline, or valerianate of caffeine.

Ernest Waggett.

Somers, Lewis S. (Philadelphia).—*Acetanilid as an Antiseptic in Chronic Suppurative Otitis.* "Med. News," April 4, 1896.

THE author refers to the use of acetanilid as a general antiseptic and the satisfactory results obtained. He points out that it is exceptionally suitable for application in cases of suppurative otitis, being non-irritating, odourless, antiseptic, soluble in the discharge, and not caking or forming lumps, and advises that it should be used mixed with equal parts of fine boric powder. He urges the importance of the most careful antiseptic precaution being necessary in order to secure success, the nose and naso-pharynx being frequently washed out with an antiseptic solution.

The author mentions twenty-six cases treated by the application of acetanilid, the duration of the discharge varying from three days to twenty years, averaging

three years. In every case cure was complete within three months, the average length of treatment being one month.

In conclusion, he points out that the above results are far in advance of those obtained by the use of any other drug ; in some of the cases one application being sufficient to stop the discharge.

StGeorge Reid.

REVIEWS.

Passow. — *Eine Neue Transplantations-Methode für die Radikaloperation bei Chronischen Eiterungen des Mittelohres.* ("A New Transplantation Method for the Radical Operation in Chronic Suppurations of the Middle Ear.") By Staff Surgeon Dr. PASSOW. 1895. Hirshwald : Berlin.

THIS method resembles to a considerable extent that already described by Siebenmann, and practised by various surgeons in cases of cholesteatoma, the object of course being to make a permanent opening in the mastoid region. Siebenmann's flap was taken from the skin behind the mastoid incision ; Passow's, on the other hand, is taken from the tissues in front, and the mastoid incision is made about half an inch further back than usual, beginning a good two centimètres from the attachment of the auricle and behind the tip of the mastoid process. It is carried almost perpendicularly upwards, and gradually approaches the auricle at the level of the external meatus, where it is only from one to one and a-half centimètres behind the attachment. It then continues upwards parallel to this. The length of the incision depends upon the individual case. The periosteum is separated at the lower part, and the operation is carried out very much in the ordinary way ; but in the later stage of it another flap is made by cutting from the inferior extremity of the original incision forward and downward from one to one and a-half centimètres, and then from the anterior extremity of this vertically upwards in a direction parallel to the primary incision, and extending up to the lower insertion of the auricle. A tongue is thus formed, which is dissected up to the depth of the superficial fascia of the neck. This flap is then turned upwards and backwards, and its originally anterior edge is stitched to the posterior lip of the mastoid incision. The space from which it was dissected is obliterated by the bringing together of the skin margins in front and behind. The applicability of the highly ingenious method will be readily appreciated and easily understood, but all difficulty is removed by a moment's study of the beautiful illustration attached to the little brochure on the subject.

In many cases it is almost impossible to arrive at a determination, before commencing the operation, whether the extent of the supposed cholesteatoma is such as to call for the establishment of a permanent post-auricular opening ; and if the incision is made in the usual position the above-described method of transplantation is practically inapplicable, whereas Siebenmann's flap can be made at the end of the operation as usually performed. At the same time there seems no objection to making

the incision as far back as Passow directs, if there is the least probability of a permanent post-auricular opening being required. The space left bare by the dissection of the flap appears to be more easily closed by the approximation of the skin margins than in the case of that left in Siebenmann's operation. The minuter details must be studied in the original.

Dundas Grant.

Gleason. — *Diseases of the Nose and Throat.* By E. BADWIN GLEASON. Kimpton's "Students' Essentials." Second Edition, revised, 124 illustrations. 1896. London: Kimpton.

THIS is the second half of a book of 290 pages, the other half of which is devoted to the essentials of diseases of the eye. In a previous issue we had the pleasure of awarding a considerable degree of praise to the matter presented by Dr. Gleason in the companion volume on the essentials of diseases of the ear, expressing our regret on that occasion, as we do on this, that such an intelligent and acceptable *résumé* of the information on the subject should be marred by the undesirable adoption of the catechism form. We ask, for instance, what useful purpose is obtained by heading a long paragraph of three pages by the question—"How is the removal of exostoses accomplished by means of drills and trephines driven by an electric motor?" The answer, however, is admirable in its conciseness and in the method of illustration employed. At the same time the information throughout the book is excellent, and the illustrations of instruments, morbid appearances, anatomical and other features are very well selected from standard works and monographs, the author's acknowledgment of the original source being freely made. Many of them are entitled to the respect due to old, albeit well tried, friends. On the whole the book will be found a very useful one.

Dundas Grant.

Gardiner—*The History of Surgical Anæsthesia.* By H. BELLAMY GARDINER. London: Baillière, Tindall, and Cox. 1896.

THIS subject, which is one of perennial interest, is treated concisely and in a most readable manner in a small brochure of 31 pages. In it Dr. Gardiner arranges for us the landmarks, which are, however, more or less familiar to all educated practitioners; but he carries the subject to a later date, and includes the much-debated results of Surgeon-Major Laurie and the Hyderabad Commissions, without, however, offering any definite judgment upon them. He speaks in high terms of praise of the admixture of a small percentage of oxygen to nitrous oxide gas, and we feel sure that those who have seen its action will quite agree with him. Dr. Hewitt is quoted as holding the nitrous oxide anæsthesia to be devoid of all risk whatever. Ether has yielded one death in 14,032 cases; bichloride of metholine, one in 5000; chloroform, one in 2247. We cannot help thinking that the present day graduated dose inhaler might very well have received the honour of reference or even detailed description in this work, as well as the one described by Jabez Hogg in the "Illustrated London News," February, 1847.

Dundas Grant.

Rowland, Sydney.—*Archives of Clinical Skiagraphy.* The Rebman Publishing Company, Limited, 11, Adam Street, Strand, W.C. 4s. Portfolio, to hold twelve numbers, 2s.

By these archives we shall be able not only to see month by month what further steps this wonderful scientific discovery of the so-called X rays has made, but we shall have a permanent record of those steps.

Mr. Rowland leads us gradually and skilfully through the laboratory, explaining first the brief history of the discovery, next construction of a crystoscope; then by the aid of a diagram the action of the light rays, and their course, as shown by a diagram, is described in the same pleasant and easy manner. We have now a plate which shows the actual process of the production of a skiagram of the leg. We hope that Mr. Rowland will tell us a little more about the current he uses, for instance, and what changes are required between our main and the Crookes tube. This first number is strangely silent on all these points.

The plates, which are of much clinical interest, include a needle imbedded in a finger, two cases of exostoses, a gumma of the radius, and a double plate of a three months old child. These collotypes are all well produced, and show in how short a time the X rays have been mastered as it were, and how, if this be the product of so brief a period, what and where will be the end? We wish the author success.

Smith.—*Our Growing Children.* By GERARD SMITH. London: Bale and Sons, Great Titchfield Street.

THIS little book, which is written in a popular style, has several good points, one of them being its illustrations. The text is clear, and as a book to be studied by the laity is very good, but there is not sufficient detail to place it on the list of text-books. Our object in reviewing this book, though briefly, is that here we have a book which we can place in the hands of parents—an advantage which will be recognized in the endeavour to obtain the fullest benefit after the removal of nasal obstruction.

Avellis (Frankfurt-a-M.) — *Der Gesangsarzt. Gemeinverständliche ärztliche Bemerkungen zur Gesanglehre und zur Hygiene der Stimmorgane.* ("The Singers' Physician. Popular Aid to the Knowledge of Singing and Hygiene of the Vocal Organs.") Frankfurt-a-M. Alt. 1896.

THE author gives some rules on vocal hygiene, but omits all anatomical and physiological remarks, because he does not believe that they will be understood by singers. The laryngologist only, can prevent vocal misuse at conservatoires; and proper direction of muscular energy best strengthens the voice. We cordially endorse the following views expressed by the author:—Good singing is not possible if the nasal passages are obstructed; therefore one should not sing during catarrh or with nasal obstruction.

Michael.

NEW INSTRUMENTS.

A HANDY POST-NASAL ADENOID FORCEPS.

THE forceps of which a cut is adjoined has been designed and used by Dr. Quinlan, of New York, for a considerable time. It will be observed that it is much smaller than Loewenberg's instrument or its modifications.



It has a comparatively large grip, and its blades are notable for their flat shape. There is, further, plenty of room for the uvula to hang between them without being nipped, and the parts can be taken asunder at the so-called French joint, so that thorough cleansing can be perfectly effected. The somewhat peculiar snout-like projection of the cutting part of the blades seems rather to fly in the face of our stereotyped ideas of the anatomy of the part, but to those who have recognized how frequently the atlas vertebra projects forward, leaving a concavity above it from which the vegetations chiefly originate, the applicability of this particular instrument will be quite evident. In point of fact, the undersigned has used it in a very large number of operations, and with the greatest possible satisfaction, especially in the class of cases above referred to.

Dundas Grant.

WATER PRESSURE ACCUMULATORS.

Water Pressure Accumulator Syndicate, Ltd., Trafalgar Buildings, London, W.C.

THESE accumulators are of metal and of spherical form, and are made in three sizes, the smallest of which are very convenient for local application of sprays, etc., to the throat and pharynx, hold about a pint, and the largest about two to three gallons. We have carefully examined them, and give to our readers the following opinion in which we have full confidence.

To begin with, these globes are filled in a very simple way with water, after a deodoriser or antiseptic in concentrated form has been added in sufficient quantity to render the whole contents of the required strength. After this air is rapidly pumped in until the inside pressure is sufficiently high. The required form of spray or stream is then obtained by screwing on a nozzle which gives that particular result. At the present moment this ingenious apparatus is being adapted more to the requirements of

our specialty. A flexible tube is to be attached to the larger receiver, which will be provided with an aural nozzle and means of heating the contents—though hot water may be used at the very commencement—by means of which cerumen can easily be removed from the ear, cavities flushed—as for instance the antrum of Highmore—and all without any labour. The smallest sizes are of great use as sprays, fountains, or disinfectors. The larger sizes will prove an immense boon to all aurists, as well as to general surgeons, for if sterilized water is desired the whole globe and its fluid contents may be placed in a sterilizer, and one has then a douche of great force without any chance of contamination.

THE JOURNAL OF LARYNGOLOGY, RHINOLOGY, AND OTOTOLOGY.

Original Articles are accepted by the Editors of this Journal on the condition that they have not previously been published elsewhere.

Twenty-five reprints are allowed each author. If more are required it is requested that this be stated when the article is first forwarded to this Journal. Such extra reprints will be charged to the author.

The Editors are not responsible for opinions expressed in original Articles or Abstracts in this Journal.

Editorial Communications are to be addressed to "Editors of JOURNAL OF LARYNGOLOGY, care of Rebman Publishing Company, Limited, 11, Adam Street, Strand, London, W.C."

NOTES ON THE ANATOMY AND PATHOLOGY OF THE PERIOSTEUM OF THE EAR.

By R. LAKE, F.R.C.S.

IN investigating the anatomy of the periosteum of the ear one necessarily uses the observations of Driaspul, who proved that the lamina propria of the membrana tympani was continuous with the periosteum of the annulus tympanicus. This being so, we have only to substitute the external meatus for the annulus, and can then say the periosteum of that portion of the external meatus formed by the annulus is continuous with

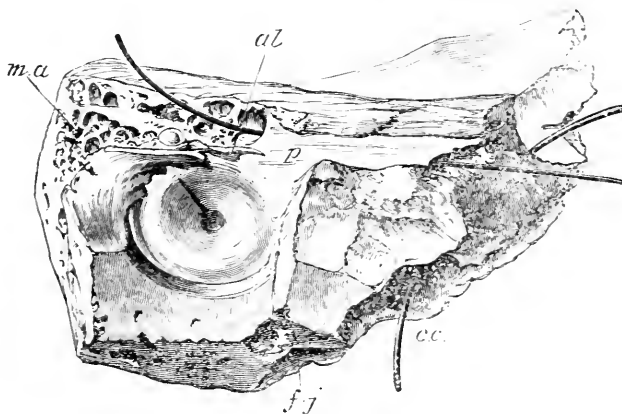


Fig. 1.

the lamina propria of the membrana tympani—that is, all except the superior part. In the horse, this portion of the periosteum is continuous with the muco-periosteum of the attic. In man, part certainly is con-

tinued on into the membrana, supporting the leash of blood vessels which passes to it slightly posterior to the malleus. Of the remainder, that portion which covers the anterior wall of the attic appears to take the same course as in the horse—also most likely giving a few fibres to the membrana Shrapnelli.

At the British Medical Association meeting in 1895 I showed some preparations which tended to prove that the periosteal structures on the



FIG. 2.

inner side of the membrane had an important share in the formation of the membrana, also that the periosteum of the Eustachian tube was directly continuous with that of the meatus.



FIG. 3.

In fact, so delicate is the periosteum of the external meatus that in Figure 1 it has been removed, giving the impression that the membrane is entirely derived from the Eustachian periosteum (*p*).

In Figure 2, however, where the meatal periosteum is preserved, its continuity with the tubal periosteum is seen: in the same figure the anterior ligament (*a*) shows the position of the membrane.

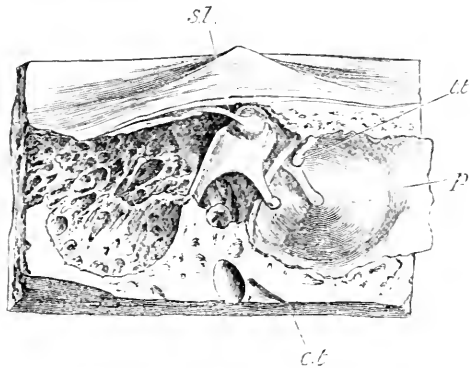


FIG. 4.

Figures 3 and 4 are from specimens cut to show the direct continuity of the tubal periosteum with membrane when seen from within: the tubal periosteum (*p*) is in the preparation whiter and clearer than shown here.

I have not been able by dissection to trace the fibres of the lining

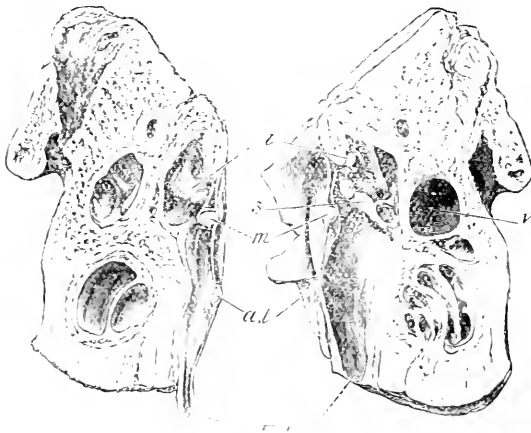


FIG. 5.

membrane of the antrum into the drum, but they doubtless take that course, except where passing into the meatus externus.

In the fœtus (Figure 5, the thin membranous Eustachian tube is directly continued into the drum and canal, and the annulus may be

removed without in any way interfering with the membrane as in Figure 6.

The pathological value of these observations is not very great, but they assist in explaining the occasional presence of bone corpuscles in the membrane, and the formation of calcareous plaques, together with those cases in which swelling of the meatus externus follows on a nasal catarrh. In these latter cases the inflammatory process extends along the Eustachian tube to the membrane, from which it is continued to the periosteum of the external meatus, setting up an acute and desquamative otitis externa.

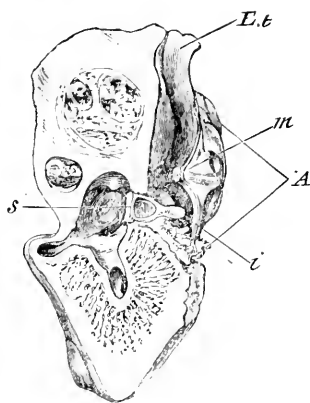


FIG. 6.

SOCIETIES' MEETINGS.

TRANSACTIONS OF THE AMERICAN LARYNGOLOGICAL ASSOCIATION (*continued*).

Eighteenth Annual Congress, held at Pittsburgh, Pa., May 14th to 16th, 1896.

President, DR. WILLIAM H. DALY (Pittsburgh).

Special Report for the JOURNAL OF LARYNGOLOGY. By JAMES E. NEWCOMB, M.D. (New York), Fellow of the Association.

*First Day, May 14th.—Afternoon Session (*continued*).*

Tubercular Infection of the Lymphoid Tissue of the Pharynx, with some Remarks on Laryngeal Infection. JONATHAN WRIGHT, M.D. (Brooklyn).

This paper was an addendum to the author's paper read at last year's Congress. Working along the lines suggested by Dieulafoy's paper on concealed tuberculosis of the tonsils, he had repeated the latter's experiments in twelve unselected cases, inoculating guinea-pigs with tonsils and adenoids (which in each case were examined histologically and bacteriologically) with negative results. The animal experiments made by Dr. W. H. Park also resulted negatively. Tubercle bacilli having been

found by Strauss and others in healthy noses and throats, Dr. Wright was inclined to think that Dieulafoy's results were due, as Cornil suggests, to surface contamination. Botey, of Barcelona, has also published results similar to those of Wright.

Reference was also reported to a case of Dr. W. F. Chappell, of New York. The patient had naso-pharyngeal tuberculosis following an operation for adenoids. Tissue taken from this case, and subjected to the same methods of examination as in the twelve unselected cases, was found to contain tubercle and tubercle bacilli histologically, while Dr. Park, by animal inoculation, also obtained positive results. This goes to prove that Dr. Wright's methods were not at fault in the twelve cases supposed clinically to be non-tuberculous.

Moreover Dr. Wright found, in taking sections from a tubercular arynx, indisputable evidence of the penetration of intact epithelium by the bacilli, but he is not prepared to say that this is possible in healthy throats.

The Relation of Diseases of the Nose and Throat to Disorders of the Digestion. Acute Diseases of the Nose and Throat. Dr. M. R. BROWN (Chicago).

He called attention to the pharyngeal hyperæmia so often found in cases of stomach cough. Asthmatic attacks were frequently due to digestive disorders, which also caused œdema of the larynx, which might be angio-neurotic in character. Allusion was made also to the various acute throat conditions seen in the course of hepatic cirrhosis. On the other hand, gastric disturbance often came from swallowing the secretions from sores in the pharynx. Glottic spasm might result from upward pressure of the diaphragm caused by gastro-enteric troubles. Much attention had recently been given to the laryngeal condition in typhoid fever. We might have all grades of severity of lesions, from simple hyperæmia up to loss of tissue, œdema, infiltration, ulceration, or perichondritis. There was no proof of the direct influence of the stomach in many throat conditions, but there was a strong clinical suggestion of the relation of cause and effect.

Chronic Diseases of the Nose and Throat. Dr. T. R. FRENCH.

He observed that chronic throat, nose, and ear disturbances were generally accompanied by digestive disturbances, but we cannot always demonstrate the relation of cause and effect between the two. Many causes producing catarrh first act on the digestive organs. Rapid eating is a great American habit, and it is a question as to whether it causes the prevalence of catarrh among this nationality. The writer had examined fifty medical students, all with catarrh of the pharynx and fauces. Of these, forty-seven had digestive disturbances; fourteen were constipated; only one had a clean tongue; forty-five were rapid eaters; thirty-three were smokers; sixteen had nasal obstruction; two were mouth breathers. The non-smokers seemed to have just as much pharyngeal catarrh as the smokers. Approximately the same ratio of different lesions was found in an examination of twenty-three women. There did not seem to be

any relation between the part of the digestive tract involved and any special localization of the catarrhal process in the throat.

Stomach disorders would also cause vaso-motor changes in the turbinated bones.

Dr. WRIGHT alluded to some recent work by a couple of Italian observers on the etiology of coryza. They had found in this disease an enormous increase in the number of sarcinæ ventriculi, which are common sojourners in the nose.

Dr. CASSELBERRY alluded to the work of Türck, who had found the same micro-organism in the stomach as in the diseased naso-pharynx. A cure of the latter cured the stomach condition.

A Case of Gunshot Wound of the Pharynx. Dr. D. N. RANKIN (Alleghany).

The patient had been shot in 1847, in the right side of the neck, the bullet penetrating two inches below the lobe of the ear, and coming out at a corresponding point on the left side. No particulars could be learned as to the existence of hæmorrhage or difficulty in deglutition. The patient had only recently been seen by the reporter, who was led to inquire into his history from seeing the symmetrical scars on the side of the neck.

Second Day—Morning Session.

A Contribution to the Pathological Anatomy of Ethmoid Disease.
J. N. MACKENZIE (Baltimore).

The paper detailed the histories of several cases of the ordinary type, and gave a description (with illustrative drawings) of the microscopical examination of the tissue removed from the region of the middle turbinated. It showed the chronic inflammatory changes which are characteristic of all inflammatory processes in the nasal chambers—a gradual destruction of the glands by leucocytes, and by the contractile effects of fibrous tissue. We were accustomed to call the tissue removed in such cases myxomatous, but the writer would take exception to this use of the term on the following grounds:—

1. The so-called myxomatous degeneration is not really a mucoid change at all, but a simple inflammation. The word "myxomatous" has been very loosely employed. The nasal chambers are really the last place where we should expect to find any tissue resembling true mucoid formation, as Wharton's jelly or the vitreous humour. The ordinary mucous polypus is an œdematous fibroma, *not* myxoma: that is, it is a chronic degenerative destruction by round cells and fibrous tissue, and is a legacy of simple inflammation. The term "endo-rhinitis" might be applied to these cases.

2. The error into which we have fallen has resulted from our looking at the matter entirely from the clinical and not from the microscopical side.

3. Ethmoiditis, moreover, even if purulent, may last for several years

without causing any bone lesion. Many writers speak of caries and necrosis as frequent accompaniments of this condition. The primary origin of necrosis, however, in these cases has not been established. Pent up secretion may sometimes cause osteitis, but not necrosis ; and polypi do not arise from necrosed bone.

4. The changes here found represent successive stages of the same affection, and hence a variety of names is not necessary.

5. There is a similarity between the new granulation here occurring and sarcoma. We must therefore always examine different portions of the masses removed before pronouncing upon their nature.

Dr. CASSELBERRY remarked that while Dr. Mackenzie had taken the word "myxomatous" away from us, he had given us nothing to use in its stead. He objected to the term "endo-rhinitis."

Sero-purulent Maxillary Sinusitis in Chronic Lead Poisoning. Dr. H. L. WAGNER (San Francisco). (Paper read by title.

The advancement made in the study of etiology in diseases of the nasal sinuses has greatly improved the methods of treatment. The results in this study are obtained, not only by histological and bacteriological analyses, including *post-mortem* examinations, but also depend upon a careful examination of the whole system.

The following case fully illustrates the views on this subject :—

H. M., aged thirty-two years ; occupation, carriage-painter for twelve years ; consulted me a year ago for severe neuralgia of the right supra-orbital region. These neuralgic pains had existed for three consecutive years, occurring daily at intervals from one to twelve hours, and consequently the patient was obliged to relinquish all work. He was afflicted with hyperosmia : strong odours of any kind producing pain. Opiates and various coal-tar derivatives were prescribed by his former physicians, without any result, and the resection of the right supra-orbital nerve even failed to bring relief. All teeth in the upper jaw—some of them decayed and discoloured—had been extracted, the source of trouble being located there ; but no relief followed.

Examination.—Patient a well-built man, skin yellow in colour, flesh lacking in firmness, no syphilis, eyes and ears normal, throat showed slight pharyngitis sicca. Nose : Left side normal ; right, slight hypertrophy of the middle and lower turbinated bodies. At the entrance of the hiatus semilunaris a crust formed daily, which could easily be removed, and a slight sero-purulent discharge—containing staphylococcus aureus and a few non-pathogenic cocci—could only be observed every second or third day. Face : Transillumination showed little difference between the two sides. No external swelling of face. Pressure on the supra-orbital region produced no pain. Mouth : Hypertrophy of the right upper gum ; no blue lead line could be detected. Pressing upon the region of the right first molar produced severe neuralgic pain. This assured me that the cause of the trouble existed in the right antrum. Being unable to probe or irrigate the antrum through the hiatus semilunaris, I entered the cavity through the hard palate under cocaine anæsthesia with the aid of a spearhead drill (this method, which is quick

and painless, I employ frequently, and by injecting sterilized warm water a slight sero-purulent discharge was observed coming from the right nostril. Shortly after the patient was somewhat relieved, and I decided to open the antrum through the canine fossa. This was accomplished under chloroform with a large trephine drill. The antrum showed in the lower and side walls a peculiar bluish-grey hypertrophy of the mucous membrane. Probing did not reveal any caries of bone, but touching certain places produced severe pain. Microscopical examination of the hypertrophy, made by Dr. D. Montgomery, showed "loose connective tissue infiltrated with much serum and a fair number of round cells of inflammation; the piece of tissue had a covering of columnar epithelium. There were some micrococci in the tissue." After thorough removal of the hypertrophied tissue, dry treatment with borated gauze gave no relief, and also other methods of treatment were unsuccessful. I then decided to examine the urine for albumen, sugar, and lead, none of which were found; but on examining fresh tissue, removed from the antrum, I found with sulphide of sodium the characteristic lead reaction. I placed the patient at once under iodide treatment, and in a few days he was relieved of all pain; the sero-purulent discharge then ceased, and with it the formation of crusts.

Traces of lead were now detected in the urine. The patient has steadily improved, and has remained ever since free from pain.

In this case we must assign the diseased condition of the antrum, including the neuritis of various nerves, to the deposit of lead--perhaps as an albuminate. Similar conditions have been observed in a few eye cases (Stood), where optic neuritis, accompanied by severe headache, was produced by chronic lead-poisoning.

Study of Irruption of the Teeth into the Nasal Chambers. Résumé of reported Cases and Report of Additional Cases. Dr. A. W. MACCOY (Philadelphia).

Dr. MacCoy called attention to some of the reflex symptoms which may accompany the presence of teeth in the nose, instancing access of cough and laryngeal spasm. He narrated his personal experience with such cases, and gave a complete bibliography of the subject to date. He also referred to a case of nasal sarcoma, where during examination a tooth was discovered in the nose, and the interesting question was suggested as to whether the irritation therefrom might not have been the initial irritation leading up to malignant growth.

The Control of Hemorrhage in some Operations in the Nose and Throat. Dr. A. COLERIDGE, Jun. (Boston). Read by title.)

The first consideration in undertaking an operation under an anæsthetic is the position in which to place the patient. The horizontal position with the patient on a table is often contra-indicated by the danger of blood finding its way into the pharynx and larynx. For operations confined to the nasal cavity, this may often be prevented by plugging the posterior nares as a first step in the operation. The Rose position, with the head hung perpendicularly over the end of the table, although pre-

venting blood from entering the lower pharynx, is to most operators awkward and unsatisfactory. The Trendelenburg position protects the trachea from blood in thyrotomy and operations deep in the pharynx. The most generally useful position for operating in the upper respiratory tract is with the patient held sitting in a chair opposite the operator. By inclining the body well forward, blood from the naso-pharynx and mouth flows outwards, but it is absolutely necessary in using this position that there should be sufficient assistance to control the patient. It is, therefore, much easier in the case of children than with adults.

For the local control of bleeding, where the bleeding vessel cannot be found, compression offers the best means. Styptics are to be avoided if possible, as being unreliable, a loss of time, and irritating.

Hæmorrhage from the nasal cavity can usually be stopped by plugging through the anterior nares, and ability to do this easily and quickly will give the surgeon confidence in attacking this part of the body. Hæmorrhage in the naso-pharynx is controlled by filling the cavity with gauze from below, by the same method as is employed for plugging the posterior nares.

The amount of bleeding to be expected in the removal of a new growth or hypertrophied tissue depends both upon the size and number of the vessels entering the tumour and the amount of contraction allowed by the structure of the intravascular tissue, as is shown by sections cut at right angles to their attachments. Adenoid vegetations, tonsils, and myxomata seldom give rise to troublesome bleeding, whereas sarcomata and fibromata attached to the basilar process sometimes bleed copiously and persistently. The readiest method of controlling the latter is by immediate, firm plugging of the posterior nares after removal, and packing, at the same time, through the anterior nares. In the removal of adenoid vegetations the Gottstein curette, although attended with more bleeding at first, causes less loss of blood than the longer operation with the forceps.

In removing the tonsils with the tonsillotome there is a brisk flow at first, which generally subsides quickly, although in adults it may cause serious loss of blood. This can in most cases be prevented by the use of cold wire, if the patient is under an anæsthetic, or by the use of the hot wire with the help of cocaine.

Intermittent Dysphonia Spastica. Dr. F. I. KNIGHT (Boston. (Read by title.)

Dr. Knight reviewed briefly what is known in regard to this affection, which, in its well-marked chronic form, he continues to think very rare, and added the report of a recent case in order to call attention to the intermittent character of the affection—*e.g.*, it manifested itself only in the latter half of a sermon (the subject was a clergyman), presumably on account of fatigue. It appeared suddenly after the gentleman had spoken in a perfectly normal voice for an indefinite time. Dr. Knight said this was the only patient of the kind who had consulted him who did not betray his affection unmistakably during the interview.

Afternoon Session.

A Case of Unusual Laryngeal Growth. Dr. J. W. GLEITSMANN (New York).

The patient was a Russian Jew, a street merchant, aged thirty-eight, who had been hoarse for one year, but had had no emaciation, pain, cough, or dyspnoea. Examination of the throat showed externally nothing. No enlarged cervical glands could be detected. Internally the pharynx appeared healthy. There was in the larynx, on the right side, a large, almost snow-white mass, extending horizontally the entire diameter of the larynx, from the anterior commissure to the arytenoid cartilage. It appeared to be located between the true and false cord, and looked exactly as if a bunch of cotton had been inserted all along the ventricle of Morgagni. The surface was slightly corrugated, and its free border a little irregular. The rest of the larynx presented no anomaly worth mentioning. The movements of the right side of the larynx were practically unimpaired, and adduction of the cords was perfect.

With Landgraf's double curette a piece of the growth was removed, with only slight bleeding and no unpleasant reaction. Subsequent paintings with lactic acid solutions and mild astringents with iodol were practised. Unfortunately, the fragment removed was not deeply enough cut to reveal the microscopical structure, and in about two weeks a larger piece was excised. The report thereon was as follows: "Papilloma durum laryngis, probably malignant, and perhaps carcinomatous. It is composed of proliferated papillary mucosa, covered with a thickened epithelial layer. The surface layer of epithelia presents itself as a horny covering; the underlying epithelial cells show marked proliferation with a splitting up of the nuclei. The sub-mucosa shows a small-celled infiltration in consequence of connective tissue proliferation. The epithelial layer shows a tendency to invasion of the sub-epithelial tissue, as in carcinoma. The glands at the margin of the growth appear very much changed. The individual tubules or ducts should appear distinctly separate one from another, instead of which the cylindrical epithelium appears at certain points to merge from one duct to another." After the second operation the patient refused further treatment, and the case was lost sight of.

Dr. Gleitsmann observed that allusions to whitish looking tumours of the larynx are very scarce in literature. Frankel ("On Cancer of the Larynx," 1889) states that it is erroneous to suppose that in its earlier stages cancer of the cords produces hyperemia or inflammation. On the contrary, the carcinoma often presents a surprisingly white appearance. Also Semon has suggested that an unusually snow-white colour or grass-like appearance in tumours points strongly to malignancy.

A Report of Cases of Tuberculosis of the Larynx, with Results of Treatment as far as ascertained. The topical Use of Bromoform, Formaldehyde, Guaiacol, and Protonuclein. Dr. S. SOLIS-COHEN (Philadelphia).

Owing to a mistake of his secretary Dr. Cohen's manuscript was missing, and he spoke briefly from memory, giving some of his experience

with the remedies enumerated in his paper. 'Latter will appear in full in "Transactions." He was accustomed to use a spray of hydrogen peroxide for cleansing the larynx, following this with some alkaline detergent. He had seen good results follow the use of formaldehyde rubbed in, in the shape of from two to ten per cent. solutions of formalin, which is the forty per cent. commercial preparation of formaldehyde. Cocaine four per cent.) should be previously applied. Some burning pain, lasting a minute or two, generally followed. He had found bromoform to relieve the pain and cough.

Dr. GLEITSMANN praised the effects of parachlor-phenol in two per cent. solution; it produced shrivelling and absorption of infiltration. Lactic acid was good for ulcerated surfaces only. The phenol preparation he was accustomed to mix in equal parts of glycerine and water, so as to prevent stickiness.

Some of the Unusual Manifestations of so-called Catarrhal Laryngitis.
Dr. C. C. RICE (New York).

Catarrhal laryngitis not dependent upon, or not secondary to, some primary changes in the nose and pharynx is rarely seen. Given a certain amount of nasal obstruction, congestion, and hypertrophy, we always expect to find as a result the same kind, but a lesser degree, of catarrhal disturbance in the pharynx, and still less in the larynx and trachea. But there are exceptions to this rule, as the various diatheses and different visceral organic affections may each cause its own peculiar sequel in the upper respiratory tract.

There is a laryngeal condition resulting from physiological errors of the muscles of the organ, occurring in singers and speakers. Its most prominent expressions are congestion, swelling, and muscular relaxation. In the ordinary cases secondary to trouble higher up, we rarely find more than congestion of the sides of the larynx and of the epiglottis, the vocal bands not being much affected. The speaking voice is but little affected, while the untrained singer would be troubled with hoarseness; but most patients, if careful, are able to continue at their work, and need only to have the upper air tract put in order. So, also, persistent treatment will relieve the laryngitis sicca due to atrophic rhinitis and a dry pharynx.

The peculiar form of trouble to which the writer wishes to call attention is nearly always related to an unusual use of the voice.

1. There are cases in men, usually bass singers, presenting atrophy of the sub-mucous structures of the middle and lower pharynx without dryness. The pharynx and larynx are considerably atrophied: epiglottis large, the vocal bands long, and always exposed to congestion. There is a loss of power in the internal laryngeal muscles, especially the thyro-arytenoids and transverse arytenoid muscles. In such cases the symptoms are referable to the enlarged epiglottis, which rubs against the sides of the tongue. There is reflex congestion of the entire larynx. There is frequent spasmodic closure of the vocal bands, and any unusual vocal effort causes a tickling and hoarseness.

In regard to the enlargement of the ventricular bands in the condition

known as choked voice, it is difficult to say whether this enlargement of ligamentous structure represents nature's efforts to supply vibrating tissue in place of the disabled true cords, or whether the enlargement of the false cords has been entirely produced by faulty muscular action, such as forcing the sides of the thyroid cartilages together by a too forcible adduction of the bands. In the cases observed the vocal cords lack tone. The condition is probably due to a forcing of the voice. Prognosis is bad, because actual hypertrophy of the ventricular bands has already taken place.

There is also a condition which may be called "congenital vascularity of the vocal bands." The cords are reddened, but voice production is not interfered with. The rest of the larynx seems to be perfectly normal. No blood vessels can be detected, but the bands are uniformly red.

Again, we may find a localized congestion of some part of the larynx, not catarrhal, reflected downward from above, but congested mucous and sub-mucous tissue, evidently caused by over-use of some particular group of muscles. This condition most frequently involves the arytenoid cartilages. The inter-arytenoideus is probably the over-worked muscle in these cases, as it forces the two cartilages too strongly together.

There is, moreover, the common condition of "singers' nodes." The writer has seen it come on in the course of three days. These enlargements, as soon as the voice is produced without muscular contraction about the larynx, show a tendency to be drawn upwards from the free edges of the cords to the upper surfaces. The proper treatment of such cases is to practise diaphragmatic breathing, and to place the expiratory impulse necessary to tone production in the forward part of the face and mouth, or well up behind the nose and away from the larynx.

Finally, there is the "voice fatigue," characterized by the disability of some one or more of the intrinsic muscles. The action may become so disordered that apparently an abnormal compensatory muscular action is attempted by the larynx to supply the loss of the feeble muscles. Such patients talk in a hoarse tone, but are able to produce certain low notes in the scale fairly well. On phonation the epiglottis and larynx, instead of being raised, dip down, and the whole larynx is pulled backward. The antero-posterior diameter of the glottic cavity is shortened. Vocal tension is impossible, and the tone is husky.

The conclusions are—1. There are two ordinary types of catarrhal laryngitis, the one following and dependent upon nasal obstruction, and the other a laryngitis sicca, an extension downwards of an atrophic rhinitis and a dry pharyngitis. In these two processes the same pathological condition exists from the commencement of the nose to the bronchial tubes.

2. We occasionally see laryngeal disturbances which, from their appearance, might belong to one of these two ordinary types, but the significant point is that they are present when the nose and pharynx are in excellent condition : or, still again, that the laryngeal disorder, although in kind like that of the nose, is in degree much greater, which is the reverse of the usual condition.

3. There are several disturbances commonly classified under "catarrhal

laryngitis," which seem to bear little or no relation to a previously existing nasal or pharyngeal disease. They are commonly observed in singers and public speakers, and are undoubtedly caused by vocal over-use and improper methods of breathing and tone production.

4. We may also have :

(a) A general tissue atrophy of the soft parts of the pharynx and larynx, which produces a disordered relation and a general muscular weakness of the larynx.

(b) The permanently enlarged and usually congested epiglottis, the larynx as a whole being nearly normal.

(c) The "choked voice" caused by actual enlargement of the ventricular bands.

(d) A permanent and perhaps congenital vascularity of the vocal bands.

(e) A localized congestion of some portion of the larynx, probably indicating an over-use of some one of the muscular groups, especially the transverse arytenoid.

(f) "Singers' nodes," caused by incorrect vocal methods, and cured by proper breathing and singing.

(g) Muscular fatigue evidenced by hoarseness and loss of voice.

5. These various disorders should be recognized by proper names, their etiology appreciated, and they should not be confused with the ordinary phenomena of a simple catarrhal laryngitis.

6. Little dependance can be placed upon local medication, unless particular attention be given to proper methods of breathing and voice production.

Dr. DE ROALDES had seen the reddened cords alluded to in singers who sang perfectly well. The condition was more common in basses, baritones, and in persons of gouty and rheumatic diathesis. It occurred less often in sopranos and altos.

Dr. SIMPSON said this condition was partly due to climatic influences and to over-use of the voice. Few great singers escaped laryngeal trouble at some time or other : and those few who did he was inclined to look upon, in a certain sense, as freaks, for he had sometimes thought that prolonged singing was an unnatural use of the vocal powers.

Report of a Case of Incomplete Fracture of the Left Cornu of the Thyroid Cartilage, resulting from self-inflicted violence. Dr. A. W. DE ROALDES (New Orleans).

The patient had swallowed an olive stone, and the fracture occurred in consequence of his violent manipulation of the outer tissues of the neck in his effort to dislodge the foreign body.

A Case of Perichondritis of the Left Crico-Arytenoid Joint from an Unusual Cause. Dr. H. S. BIRKETT (Montreal).

The patient was a young man who contracted gonorrhœa, and who was attacked by inflammatory rheumatism during the course of this trouble affecting the left knee, ankle, and left shoulder joints, and with the onset of this he developed a soreness and difficulty in swallowing situated altogether at the left side of the throat.

Upon examination the mucous membrane over the left crico-arytenoid joint was swollen and œdematous. The ary-epiglottic fold on that side was not swollen. The vocal cords were white in colour, and the movements of the left one, that of adduction and abduction were decidedly slower than those of the right. Pressure over the affected joint outside was very painful. The voice was hoarse. The treatment consisted in constant applications of Leiter's ice coil, which afforded the patient a great deal of relief. The condition was regarded as one of acute rheumatic affection occurring in the course of an ordinary gonorrhœal rheumatism.

Third Day.—Closing Session.

DISCUSSION.

The Sequelæ of Syphilis and their Treatment. *The Nose*—CHAS. H. KNIGHT. *The Pharynx*—J. E. H. NICHOLS. *The Larynx*—W. K. SIMPSON.

Dr. KNIGHT said: The diagnosis of late syphilis of the nose is often obscure. The notes of a case of intranasal tumour, pronounced a sarcoma, for which excision of the upper jaw was advised, were given as an example. The patient developed a tibial node, which, together with the nasal tumour, disappeared under constitutional treatment. Reference was made to the characteristic symptoms of syphilis when limited to the soft parts, and to its much more serious consequences when invading the cartilage or the bone. The fact that syphilis is responsible for a certain proportion, but by no means for all perforations of the septal cartilage, was mentioned. When the bone has been attacked two problems have to be met: (1) when and how to remove diseased bone; (2) how to remedy resulting deformity. The author advocates conservatism in dealing with sequestra, unless they are quite detached and accessible. If the dead bone is firmly attached or embedded, or its limitations cannot be clearly defined, or if it be located high up in the nasal cavity in the ethmoid region, it must be approached with great caution. Loose sequestra of large dimensions and extreme hardness may be conveniently removed through a Rouge incision. The external deformity resulting from loss of the cartilage is often not noticeable—that from destruction of the skeleton of the nose is frequently hideous. The discussion of the treatment of this condition related chiefly to a description of what is known as the Martin platinum bridge and its modifications, and of the methods of cosmetic nasal surgery.

Several cases were referred to more or less in detail. Martin's method is believed to be an excellent one with certain precautions. It is especially important that the active stage of syphilis should have been long passed, and that the patient should have had radical treatment. Great care should be taken in the construction and shaping of the platinum bridge to avoid friction and pressure; and, finally, the dissection of the soft parts must be so wide as to obviate tension after the bridge has been put in place. The paper concludes with a reference to

the use of a simple plate of platinum slipped under the skin of the dorsum of the nose, the dissection in preparing a bed for the metal having been carried on through the nostril—a much simpler method, and one which may prove to be equally effective in conditions of moderate deformity.

Dr. NICHOLS, in discussing the question as related to the pharynx, said that, from the point of view of function, it mattered little how much the uvula and tonsils were involved. The entire destruction of the epiglottis even was well borne. Adhesions between the inferior portions of the faucial pillars caused difficult articulation and difficulty in the movements of the tongue ; when it came, however, to perforation of the soft palate, serious results might ensue.

In cases of adhesion of the palate to the posterior pharyngeal wall all caustic applications should be avoided, as they would aggravate the very conditions we wished to relieve. The iodide should be systematically administered.

Symptoms of such adhesions were : impaired voice, mouth breathing, traction in the mouth of the Eustachian tubes, causing aural complications and even otitis media, muco-purulent accumulations in the pharynx, and anosmia.

He then referred to the different means which have been used to remove these adhesions. They included various applications of the knife and galvano-cautery, with subsequent digital or instrumental dilatation. No matter how deep incisions might be made the adhesions would return, the cicatrix always advancing from the apex of the adhesion. He then described the operation devised by him several years ago, in which the adhesion is treated on the same surgical principles as the ordinary webbed finger cases. This operation was always applicable, for no case had been reported in which there was not at least a fine opening from the oro into the naso-pharynx.

Dr. W. K. SIMPSON discussed *Sequelæ of Syphilis of the Larynx and their Treatment*.

In defining syphilitic sequelæ, the author drew attention to points of difference between sequelæ of syphilis and the term as applied to other diseases. In the latter instances they are considered more as accidents not necessarily occurring with the disease—as, for instance, post-diphtheritic paralysis, following diphtheria. With syphilis they are to be expected : only varying in the length of time of their occurrence and their nature as attacking the various regions and organs of the body. Early syphilitic treatment may modify, delay, or prevent their occurrence.

True sequelæ in the larynx are those resulting from tertiary manifestations, and find their best expressions in chronic thickening, loss of substance from ulcerations and broken-down gummata, or from abscesses, from perichondritis, falling in of laryngeal walls, from loss of cartilage, ankyloses of various articulations, paralysis, and the various deformities produced from cicatricial contractions. The two principal conditions produced are loss of voice and a variable degree of laryngeal stenosis. Apart from sequelæ resulting from structural change, there is often in the larynx of chronic syphilitics a condition of hyperæmia or possibly slight

thickening, which interferes with the nicety of control of the voice. This is especially seen in those who use their voice professionally. All syphilitics, wherever the lesion may be, who use the voice professionally, are liable to a variable amount of hoarseness and loss of control over the voice. Exacerbations of chronic laryngeal syphilis may be looked upon as sequelæ. Among predisposing causes of exacerbations are over-use of voice, exposure to cold, inclement and sudden weather changes. This is seen among certain occupations, as sailors.

He emphasized the importance of recognizing these predisposing causes and sudden exacerbations. It is these sudden exacerbations engrafted on an existing laryngeal lesion that often produce the fatal stenosis, by covering up and masking the underlying lesion. Hence the difficulty, and oftentimes impossibility, of passing an intubation tube through the stenosis, which, on the surface, appears as a smooth, even, and yielding swelling.

All laryngeal syphilitic lesions are liable to sudden serious exacerbations at any time during their existence. The author called attention to the difficulty of diagnosis of syphilitic structural changes when associated with either tuberculosis, rheumatism, or malignancy; without the finding of tubercular bacilli we cannot be sure of tuberculosis, however strong the other points may be. He referred to a combined case of rheumatism and syphilis of the larynx producing stenosis, necessitating intubation, where it was very difficult indeed to determine the predominating lesion; also to a case of sarcoma of the larynx in a patient with undoubted syphilitic history. The sarcoma was spindle-celled, and recurred in spite of antisyphilitic treatment.

In the treatment he spoke of the general use of iodide of potassium and mercury, either alone or in combination, for all cases short of stenosis, mentioning the intra-muscular injections of bichloride of mercury as lately reported by M. Irsai, which had been used with marked effect in late manifestations of laryngeal syphilis. When stenosis was not present the general treatment used is sufficient. With stenosis there was needed in addition the mechanical treatment of either tracheotomy or some form of dilatation.

The unsatisfactory results of the older methods of dilatation, as represented by the Schroetter method, the oft-repeated necessity of introduction and the rapidly recurring stenosis after the removal of the instruments, owing to the transient nature of their effects, necessitated also previous tracheotomy. Not until we had the O'Dwyer method of intubation were these difficulties overcome.

Intubation by the O'Dwyer method proved the tolerance of the larynx in these cases to long and continued pressure, which is the main feature sought in bringing about a cure. Intubation also, in a great majority of cases, did away with the necessity of a previous tracheotomy, allowing the function of breathing to be carried on while pressure was being exerted. The pressure of the intubating tube undoubtedly causes absorption of morbid tissue in certain cases, while in other cases it wears out the tendency to recurrence of the stricture.

Pressure can be better exerted in the inter-cordal space and in the

sub-glottic region ; in the supra-glottic region the space is larger and more yielding, and the size of the tube corresponding to that portion may have to be enlarged. The tube may be worn from one day to a number of months. In the adult it is best, if possible, to insert tube by aid of the mirror, exerting very often considerable pressure in order to pass the different strictures before the introducing instrument is withdrawn.

Glottic spasm may be very strong in some cases. It may be necessary to incise web-like tissue before the tube can be inserted ; the pressure of tube will absorb the incised web-like tissue. Cocaine should be used before the introduction of the tube. The string should be left in for some little time at first, so that the tube may be speedily removed in the event of stoppage. Metal tubes as a rule are the best, as by their weight they sink deeper down in the larynx, and do not rise up, as, for instance, in the act of deglutition. It may be necessary at first for patients to swallow in Casselberry position—*i.e.*, on an inclined plane, head down—or it may be necessary to either use a stomach tube or feed by rectum : the natural act of swallowing soon adjusts itself.

Intubation is rendered difficult when, from whatever cause, the mouth cannot be well opened, or when a tracheotomy tube has been worn for a long while. A long wearing of the tracheotomy tube renders it more difficult for the larynx to elevate itself, and also produces an added stricture at the superior margin of the tracheotomy wound. One should always be ready to do a tracheotomy if, from whatever cause, intubation fails to relieve a severe stenosis. The size and shape of the tube is determined by the case in hand. The speaker agreed with Dr. O'Dwyer that intubation offers the most rational means for relieving chronic syphilitic stenosis of the larynx.

Dr. ROE had found the most serious nasal syphilis in hereditary cases, where not only the long and cartilaginous septum was gone, but even the nasal bones themselves might disappear, leaving a sulcus or hollow where the nose ought to be. In adults the process was usually confined to the cartilage, which frequently suppurated, leading to destruction of the sesamoid cartilages. He described a subcutaneous flap operation which he had devised for these cases.

Dr. DE ROALDES was opposed to the Rouge operation, as he believed that intranasal procedures would in the majority of instances secure the same result. The sequestrum could be penetrated with the drill in different directions and then be crushed.

Dr. INGALS had found syphilitic ulcerations of the cartilaginous septum rare, unless the bony septum was also involved. Of perforations, he believed that only from five to ten per cent. were syphilitic.

Dr. PORCHER called attention to the nasal condition in leprosy. In syphilis of the nose he was accustomed to prescribe mercury, controlled by minute doses of opium.

Dr. HUEBARD believed that in these conditions mercury might cause an increased destruction of bony cancellous tissue, unless the affected parts could be kept perfectly free and exposed.

Dr. DELAVAN had seen one case of complete adhesion of the soft

palate to the posterior pharyngeal wall. He would remind the gentlemen of the possible operative dangers in these cases of primary and secondary hæmorrhage.

A Remarkable Case of Fibro-Chondroma of Branchial Origin, or so-called Supernumerary Ear, removed from the Throat of an Infant six weeks old. Dr. A. W. DE ROALDES (New Orleans).

The child from birth made a queer noise in breathing, and seemed to strangle. This was at first referred to mucus in the air tubes or to possible croup. On examining the mouth, a growth was discovered. On crying, it seemed to come down from behind the soft palate, descend to the aditus laryngis, rise again, and finally lie on the dorsum of the tongue. Its covering was judged to be cutaneous and not mucous. It contained cartilaginous nodules, and was attached to the left posterior faucial pillar. The post-nasal space seemed clear.

The mass was removed by evulsion, and appeared like a supernumerary ear in shape. Examination showed it to be covered with a histological structure exactly like true skin, with also fat and connective tissue and a fibro-cartilaginous nucleus.

A diagnosis was made of fibro-chondroma of branchial origin. The external ears were normal and family history negative.

Acute Disease of the Lingual Tonsil. H. L. SWAIN (New Haven). (Read by title.)

Dr. Swain said that, if one was to judge by the amount written on this subject, it neither attracted or deserved much attention. If he was to judge by his own experience—which in the last three years had developed the fact that he must have formerly overlooked many cases of acute trouble in this locality—the subject had been and was still being sadly neglected. In any case, he had become convinced that acute lingual tonsillitis was often the cause of symptoms which were referred to other parts of the throat, simply because the latter were more frequently inflamed and more easily seen.

After some remarks on the anatomy of the parts, by which it was made evident that from the nature of the tissue and its surroundings acute inflammation would rarely assume the peritonsillar type, he went on to describe the symptoms of the various forms of acute lingual tonsillitis. He distinguished three varieties: the simple, the follicular, and the peritonsillar or phlegmonous. The symptoms were the same as in other acute diseases of the throat, modified by the difference in the locality affected. Especial stress was laid upon the cough which is so often present in these troubles, and persists long after the other symptoms subside. Very often one was led to blame the larynx in such cases when the lingual tonsil was at fault.

When the deeper seated tissues were affected much severer symptoms arose, principal among which was the involvement of the epiglottis and glottis. In such cases life might become endangered, and prompt and radical measures were necessary. Tracheotomy had to be sometimes performed.

In discussing the treatment he remarked that in no acute throat troubles were there so evident and prompt effects produced by proper local treatment as in this. Of course repetition was necessary, but one uniformly had some reward for one's labours. Anything which would reduce the swelling and inflammation was to the point. Boro-glyceride applied to the parts, and followed by a powder containing tannin and a small amount of morphia sulphate, seemed to give as much relief as anything, to be assisted by frequent hot demulcent gargles. Systemic remedies were indicated in the same way as in other forms of tonsillitis.

He closed the paper with a short history of a case of abscess of the lingual tonsil, which had slowly developed upon an attack of faucial tonsillitis. It had been ushered in by a sharp attack of œdema of the glottis. The abscess had formed close to the ary-epiglottic fold, and broke well back toward the arytenoid cartilage.

The Principles of Treatment of Simple Acute Laryngitis and Bronchitis. Dr. THOMAS HUBBARD (Toledo). (Read by title.)

Most of the existing literature on the use of expectorants is full of inconsistencies, and much of the treatment advised is irrational. Stimulating expectorants fortified by opiates, and local palliative treatment, are quite too popular, to the unwise exclusion of a judicious use of relaxing expectorants.

Attention is called to the essential features of acute inflammation of the middle respiratory tract. Hyperemia of the bronchial membrane with more or less swelling, produces a condensation of the cellular elements, since the same number of epithelial cells occupy smaller area in proportion as the calibre of the tube is lessened. This is one reason why it is so difficult to re-establish mucous flow, the outlets from the glands being closed. Retained mucus ferments, and becomes acrid and irritating, whether within the substance of the membrane or in the tubes.

Inflammation of throat and bronchi is often gradually progressive. The larynx may be in a state of resolution, and the bronchi in the acute stage, and *vice versa*, the acute stage in the larynx being prolonged by constant reinfection from diseased throat foci. Treatment must be directed in accordance with the more severe condition.

The primary indication is to establish a free flow of mucus. Apomorphia in $\frac{1}{30}$ gr. doses, repeated every two to four hours, is the best relaxing expectorant. Except in very severe cases and in debilitated subjects it is rarely necessary to follow with stimulating expectorants. Where relaxing expectorants are judiciously administered there is much less indication for opiates. All forms of abortive treatment are deprecated.

Case of Squamous Epithelioma of Velum Palate Cured by Injections of Caustic Potash. Dr. HUBBARD.

For more than a year the tumour, of flat tabular type, situated partly in the velum and partly in the anterior pillar of the fauces, on the right side, had resisted internal and local treatments at the hands of several

practitioners and specialists. The cocaine habit was established. In August, 1894, he was on the verge of collapse from malnutrition, his sole diet being milk and ice-cream in limited quantity. The cocaine habit was first cured, and he improved somewhat, but nothing relieved the dysphagia. Injections of caustic potash by curved platinum needle destroyed a conical shaped tumour mass. Lesser injections were repeated wherever proliferating epithelial growths were seen around the edges. Cicatrization was rapid, and so was the improvement in general health. He gained forty pounds in two months. There are no signs of return now, nearly two years after first injection.

Some Notes of Two Cases of Sarcoma of the Nasal Chambers and Accessory Sinuses. Dr. A. A. BLISS (Philadelphia).

Case I. Patient, aged four years, with a negative family history. One year ago last January its left nostril became occluded with what were called "polypi." These were removed, but recurred in six weeks. In the next eight months the nostril was cleared out no less than thirty times. When he (Dr. Bliss) first saw the case the nostril was full of the growth, the septum deviated to the right, left eye-ball protruded, and the growth had extended into the left post-nasal space and out through the ear. The glands were not involved. The antrum was opened and found full of a fungoid mass, which was removed. The orbital roof was intact. The post-nasal space was cleared out with the finger and cutting forceps. There was considerable hæmorrhage, checked by iodoform gauze packing. Later, silver nitrate and iodoform were applied to the wound. There was no recurrence of the growth, but in six weeks the sub-maxillary glands became enlarged, the respiratory and brain centres became affected, and the child gradually died from exhaustion in a few weeks.

In this case it was believed that the malignant process commenced in the left middle turbinate or ethmoidal sinus, and that, following the path of least resistance, it grew down, forward and backward out through the ear, outward into the maxillary sinus, and upward, causing protrusion of the eye-ball.

Case II. Boy of nine. Left nares involved with exophthalmus and cervical adenopathy. It was stated that the child had been well up to three weeks before being first seen. His bad general condition precluded operation. The case was still under observation.

In both these cases noteworthy points were the early age of the patients and the rapid development of the malignant process.

During the Sessions of the Congress the following additional papers were read by title :—

Some Thoughts about the Prophylaxis of Nasal Catarrh. Dr. CARL SEILER (Philadelphia). *A Case of Myxœdema of the Throat.* Dr. JOHN W. FARLOW (Boston). *Tracheal Stenosis.* Dr. SAMUEL JOHNSON (Baltimore). *Treatment of the Early Stage of Diphtheria.* Dr. S. H. CHAPMAN (New Haven). *Erysipelas of the Air Passages.* Dr. WM. PORTER (St. Louis). *Some Observations on Laryngeal Tuberculosis.*

Dr. S. O. VAN DER POEL (New York). *Reflex Epilepsy from Lymphoid Disease of the Pharyngeal Vault.* Dr. U. J. HITCHCOCK (New York).

At the Executive Sessions the following gentlemen were elected active Fellows :—G. V. WOOLEN, M.D. (Indianapolis, Indiana); W. F. CHAPPELL, M.D. (New York); T. MELVILLE HARDIE, M.D. (Chicago, Illinois); M. R. WARD, M.D. (Pittsburgh, Penn.); EMIL MAYER, M.D. (New York).

And the following to Corresponding Fellowship :—OTTOKAR CHIARI, M.D. (Vienna, Austria); GREVILLE MACDONALD M.D. (London, England); ERNST SCHMIEGELOW, M.D. (Copenhagen, Denmark); HOLGER MYGIND, M.D. (Copenhagen, Denmark).

The following-named officers were elected to serve during the ensuing year :—*President*—Dr. C. H. KNIGHT (New York); *First Vice-President*—Dr. T. M. MURRAY (Washington, D.C.); *Second Vice-President*—Dr. D. N. RANKIN (Alleghany, Pa.); *Secretary and Treasurer*—Dr. H. L. SWAIN (New Haven, Conn.); *Librarian*—Dr. J. H. BRYAN (Washington, D.C.); *Member of Council*—Dr. W. H. DALY (Pittsburgh, Pa.).

The next Congress will be held in Washington, D.C., in May, 1897, in conjunction with the Triennial Meeting of the Association of American Physicians.

PROCEEDINGS OF THE LARYNGOLOGICAL SOCIETY OF LONDON.

Ordinary Meeting, May 13th, 1896.

FELIX SEMON, M.D., F.R.C.P., *President, in the Chair.*

The Morbid Growths Committee report that they received from Dr. BOND a microscopical specimen and the following notes of the case :—

The patient, a man aged fifty, gave a history of attacks of huskiness and loss of voice for twenty years.

Twelve months ago voice almost went, and on examining the larynx on January 15th last a growth about the size of a pea was seen to occupy the upper surface and edge of the middle of the right vocal cord. It was transparent in centre, and had a cyst-like appearance. On February 15th it was removed by the endo-laryngeal method, since when the voice has wonderfully improved, and patient states that it is better than for the past ten years.

The growth removed was jelly-like. Microscopically it seems to be a pure myxoma.

Dr. Bond would direct attention to the long history in the case. No doubt the man may have had chronic laryngitis for some years. It was common to find some myxoma in a laryngeal tumour, but a pure myxoma was very rare. He thought it possible there may have been some growth

for a long time, and that a pure myxoma was here, owing to the time which such growth had to undergo change.

The report of the examination is as follows :—

Specimen consists of microscopical preparation of three minute portions of tissue, stained with eosin and hæmatoxylin.

Examined under low and high powers it shows a covering of stratified squamous epithelium.

Immediately beneath this there is a definite layer of fibrous tissue which is somewhat dense and firm.

Deeper down, in what was probably the centre of the growth, the tissue is much looser, more cellular; many of the cells are branched, and in this part the growth has the structure of a myxoma.

In our opinion, the appearances above described point to the conclusion that the growth is a fibroma undergoing myxomatous degeneration.

The following notes are of Dr. STCLAIR THOMSON'S case :—

Marion J., aged thirty-eight, had taught since the age of seventeen, but always in private schools, the number of her class never at any time exceeding twelve. She used to sing, but her voice had been "thick" for a year past, and for the last nine months she had given up any attempt at singing. For three months she had suffered from hoarseness and partial loss of voice, especially after using it much. A spherical growth about the size of a small pin's head, smooth, red, and pedunculated, was found projecting into the glottic space at the junction of the middle and anterior thirds of the right vocal cord. There was some injection and thickening of the adjoining surface of the cord, and impaired approximation of the cords in phonation. The growth was removed with Mackenzie's antero-posterior forceps, and sections showed that it was a myxoma—unless, indeed, it should be regarded as simply œdematous mucous membrane. In 1880 Morell Mackenzie spoke of myxoma of the vocal cords as "very rare," and said that he had only met with a single case ("Diseases of the Throat and Nose," Vol. I., page 306). It was therefore noteworthy that this growth was removed on the same afternoon as the one already referred to by Dr. Bond. Both cases occurred at the Throat Hospital, Golden Square, in the clinic of Dr. Bond, to whom Dr. Thomson was indebted for kind permission to publish this one.

The following is the report of the examination :—

Specimen consists of a single slide with six small sections, stained with eosin and hæmatoxylin. The growth is covered by stratified squamous epithelium, and consists of fibrous tissue. There are no branched cells and no appearance of true myxomatous tissue. We consider the growth to be an œdematous fibroma.

The following is the report of Dr. W. HILL'S case :—

The section presented for examination is about one square centimètre in area, and stained with hæmatoxylin, rubin, and orange.

It is of irregular outline, the surface of the tissues being represented by a narrow condensed layer on three of its four sides, but no covering

epithelium is present. The central portion is composed of delicate open fibrous tissue somewhat distorted during preparation, and other elements of the turbinate body. Roughly speaking, the peripheral zone of the section, from one to three millimètres in breadth, is of a denser structure than the centre, and has failed to take the hæmatoxylin stain fully. This zone is formed of detached and coalesced patches of diseased tissue, the larger patches presenting a sinuous outline, and sending offshoots towards the centre of the specimen. In certain spots a very definite line of demarcation, constituted by a narrow zone rich in inflammatory corpuscles which take the hæmatoxylin stain freely, separates the healthy from the diseased tissue. The latter is found to consist of the fibrous tissue of the turbinate, the elements of which have lost definition of outline and the faculty of staining with hæmatoxylin. This tissue is densely infiltrated with inflammatory corpuscles, the larger number of which are in a state of degeneration. The centres of many of the larger patches are occupied by areas staining yellow, and of granular appearance. In the neighbourhood of these caseous centres the lumen of the vessels is obliterated by infiltration and degeneration of their walls, and the diseased areas are anæmic throughout. The inflammatory process appears to result in caseation and not fibrosis. No typical tubercles are present, but here and there a concentric arrangement can be made out, and at least two well-defined giant cells are to be seen. These contain numerous nuclei placed peripherally. No tubercle bacilli have been detected in other preparations. We consider the specimen to be tubercular.

Case of Obstruction of Larynx due to a Web. Shown by Dr. BARCLAY BARON (Bristol).

A man, aged thirty-nine years, who had not had syphilis nor other constitutional dyscrasia. In October, 1894, he had hoarseness and loss of voice with gradually increasing difficulty of breathing, which induced his own doctor to perform laryngotomy.

On being admitted into the Bristol General Hospital under Mr. Baron, there was found to be intense inflammation of the whole of the larynx; the vocal cords, which were in apposition, were especially affected, being intensely red, swollen, and motionless.

In spite of all that was done he continued in this condition for three months. Tracheotomy was then performed, and the laryngotomy tube removed. The effect of this was soon beneficial,—first one vocal cord and then the other leaving the middle line, and then the anterior two-thirds of the vocal cords was found to be united by a web.

This has been cut by Whistler's cutting dilator, and dilated by Schroetter's and other bougies, and now only a small amount of web tissue uniting the under surface of the vocal cords in front persists. The tracheotomy tube has been removed, and the man is able to do his work as a farm labourer. The points of interest in the case are :—

1. There is no history of syphilis, and it is believed to be an instance of a web forming after a common cold.
2. The laryngotomy tube kept up the inflammation in the larynx, and tracheotomy is therefore to be preferred to laryngotomy.

Dr. Baron asked members of the Society to express an opinion as to the advisability of doing anything further.

Dr. HALL mentioned a case in which agglutination of the vocal cords occurred as the result of syphilis. When first seen the cords were united by only a narrow band; unfortunately, the patient declined admission into the hospital. When he applied a week later the cords were adherent nearly along the whole length, and tracheotomy had to be performed at once. Whilst under treatment for removal of the laryngeal obstruction, stenosis of the trachea occurred. The patient left the Westminster Hospital after attempts had been made to check the growth in the trachea by scraping and astringents. Some weeks after the patient is reported to have died in Paris while being operated on.

Dr. CRESSWELL BABER thought the case might be syphilitic.

Dr. BOND would not go any further with the treatment.

The PRESIDENT had a case of suicide in which a web formed where the cut was. A second web had formed above by the agglutination of the cords. Webbing might occur from inflammation. He thought laryngotomy ought not to be performed, as it caused inflammation and prevented healing.

Case of Thyrotomy for Epithelioma of the Larynx. Shown by Dr. FELIX SEMON.

The patient, a gentleman aged sixty-five, was first seen on February 18th of this year. The only symptom was hoarseness dating back nearly a year and a half, and supposed to have commenced after an attack of influenza, which had also caused purulent discharge from the right nostril; this, however, troubled the patient very little. The whole of the left vocal cord, particularly in its middle part, was considerably tumefied, and showed a granular appearance. At the same time its mobility was surprisingly free, and the hoarseness, comparatively speaking, very slight. Malignant disease had already been diagnosed by Dr. Madden and Mr. Dudley Wright. The diagnosis was further corroborated by Mr. Butlin.

The operation was performed on February 27th, and offered no incidents of importance. On opening the larynx the growth was seen to extend all over the left vocal cord, and the ventricular band also appeared somewhat swollen. In front the growth just extended to the median line. The whole affected portion was delineated by two semi-circular cuts at a distance of about three-quarters of an inch from the growth, meeting in front and behind and cut with curved scissors. Posteriorly the extirpation extended to the front part of the arytenoid cartilage, which was also removed.

The patient made an excellent recovery, except that on the third day some ominous black spots appeared in the wound, supposed to be due to infection from the purulent nasal discharge. These were scraped out, and nothing further occurred. The voice is now tolerably good, a cicatricial ridge having formed in the situation of the left vocal cord, and it will probably be better when a bunch of granulation tissue, which is at present situated just in the anterior commissure, will have been removed.

This removal, however, has been purposely postponed until after the demonstration to the Society, in order to show that not every tumefaction which appears in the neighbourhood, or in the situation itself of the scar after an operation of this kind, ought to be at once considered to represent a recurrence of the disease. The present case (which is, moreover, remarkable by its complication with purulent nasal discharge, probably due to empyema of the right frontal sinus) is particularly suitable for illustrating this fact, which has been observed by the author in three or four previous cases. The formation of granulation tissue is not limited to the interior of the wound, but also extends to the external scar, and is no doubt due to necrosis and sequestration of small portions of the completely ossified projecting angle of the thyroid cartilage. Granulations such as present now in the upper part of the wound also luxuriantly grew up from the lower parts. This, however, healed spontaneously and rapidly after elimination of two or three minute particles of necrosed cartilage, which were eliminated through the external wound, and there is hardly any doubt that the same will take place with regard to the parts in which granulations are still at present seen.

Case of Uncontrollable, Intermittent, Laryngeal Cry. Shown by Dr. BOND.

A boy, eleven years of age, began in March, 1895, one night when in bed to utter at irregular intervals a loud cry. This he continued to do until August, 1895, when he went to stay for about ten days in the country, and towards the end of the visit the cry "gradually" ceased. At Christmas, 1895, a second attack came on at 3 a.m., and has continued since. The boy has lately had measles, during which the cry was emitted as usual. Until recently the mother states that the cry persisted during sleep.

The boy seems dull and stupid; hands and arms are continually working, almost like those of a child with chorea. At intervals, varying from about twelve seconds to one and a half minutes, he utters an explosive, sudden cry of considerable volume, very like part of a milkman's cry, but not resembling any word. The cry is associated with somewhat violent action of the diaphragm, and with a lifting of the soft palate. It is never emitted during a laryngoscopical examination, but directly after such an examination has been made the cry is emitted. The boy has double proptosis, also he has adenoids of the naso-pharynx.

The child's mother has had rheumatic fever, a brother has died from "irritation of the brain." The child has never had convulsions, nor worms. There is no history of chorea in the family.

The PRESIDENT did not think the mischief organic, and asked whether malingering might be excluded.

Mr. STEWART thought the trouble might be caused by the presence of the adenoid growths.

Mr. SPENCER said they had a case in Westminster Hospital a little while ago of spasmodic cough. Patient was hypnotised, when the cough changed to attacks of sneezing. She ultimately got well.

Dr. SCANES SPICER thought, from the condition of the eyes, that it was not functional.

Dr. DE HAVILLAND HALL suggested a sea voyage. He had a case in which this had excellent results.

Dr. BOND, in reply, stated that the lowered mental condition, the almost choreiform restlessness of limbs, the action of the diaphragm, and the explosive cry, taken together, seemed to negative the idea of malingering. The case was very unlike the cases of nervous laryngeal cough, and seemed to be a case of "tic convulsif." After the removal of adenoids (which would end a source of irritation, and ensure sounder sleep), in conjunction with the administration of arsenic and a prolonged change of air in the country, Dr. Bond thought the patient likely to improve. He disapproved of the employment of faradism, thinking such treatment very likely to make the boy worse. On the other hand, he had seen a cure of nervous laryngeal cough, with stiffness of one knee, of two years' standing, cured in a few minutes by faradism.

Case of Tubercular Laryngitis on which Thyrotomy has been Performed.
Shown by Dr. BOND.

This patient, a man of forty-five, in June, 1895, had a sore throat which persisted until October last. He was then having night sweats, had been losing flesh, and had attacks of severe suffocating cough. He had pain shooting up to left ear. He had lost three children from phthisis. He was much emaciated, and his face pinched and sallow. We could find no trace of syphilis, and there was no history of it. He seemed to have had slight consolidation at right apex, having slight dulness, bronchial breathing, etc., but no râles could be heard.

The left side of the larynx was fixed. There was great swelling of the left ventricular band, which was red and coarsely granular, and at the back was superficially ulcerated. The front of left cord could be seen with difficulty. There were no enlarged glands; voice very husky.

The case seemed a doubtful one, and one on which an exploratory thyrotomy should be performed, and this was done on November 15th. The whole left ventricular band was found affected and was removed, and also the inner edge of the brim on left and the left cord. On the posterior commissure were several papillary excrescences, and the mucous membrane here was also removed. The left thyroid plate was scraped, and also the anterior commissure.

The patient left hospital a month after the operation with a narrow sinus unhealed, and with some cough. Since he has considerably improved; his temperature is normal and his weight has increased to twelve stone. The larynx is somewhat deformed and congested, but there is no definite infiltration to be seen, and no ulceration. His voice is feeble, owing in part to the escape of air through the sinus.

The specimen removed was pronounced to be tubercular, and tubercle bacilli have been found in the sputum.

Case of Sarcoma Recurring in Nose. Shown by Dr. BOND.

The patient, a man of sixty-two years of age, began to have severe attacks of epistaxis from left nose in November, 1892. When seen at the Throat Hospital, in October, 1893, the left side of nose was congested greatly swollen, and completely plugged in front by a fungating, slightly

movable mass, which bled freely on examination with a probe ; enlarged glands could be felt below the angle of left jaw. The mass was removed piecemeal by a snare, and its base thoroughly curetted and the nose firmly plugged. Afterwards the site of growth was cauterized with the galvano-cautery. The growth sprang in the front of the nose from the lower part of the septum, from the floor, and from the front of the lower turbinated bone. The enlarged glands were also removed. Recurrence occurred after two and a half years, and in March, 1896, a mass was removed from lower part of septum and floor of nose. Recurrence has, however, already occurred in nose, and there is an enlarged gland in neck.

The fact that sarcoma of the nose is so amenable to intranasal operative treatment is noticeable. Dr. Bond had seen several cases of extensive sarcoma of the nose live for years, where it was impossible to perform a radical operation, and where occasional extensive curetting, etc., gave considerable relief. He would like to ask whether others have found cases of sarcoma of nose less malignant than is commonly supposed.

Mr. C. BABER said these cases bleed very much. He had a case in which there was great difficulty in stopping the bleeding after removal. There was no recurrence.

Dr. BENNETT would merely keep the passage clear, and do nothing else.

Mr. LAMBERT LACK thought the tumours were not so malignant in the nose. Extensive operations through the nose did good.

Case of Healed Tubercular Disease of the Larynx. Shown by Mr. LAMBERT LACK.

Patient, a girl aged twenty-eight, was quite well until 1893, when symptoms of phthisis developed, and she lost her voice. In October, 1893, the patient was losing flesh, had much cough, and a hectic look. She was nearly aphonic.

Examination of lungs showed dulness over the upper half of the chest on both sides, back and front, with abundant moist sounds and bronchial breathing at the right apex.

Examination of larynx showed irregular fleshy thickening of both vocal cords, with very deficient movement on the right side. There was a prominent ulcerating growth on the anterior surface of the right arytenoid, and some oedema of both arytenoids. Treatment : cod-liver oil and iron internally, and pure lactic acid well rubbed in locally once a week. After some months' rather irregular attendance she was much improved, but the tumour remained much the same. This was then entirely scraped away with the curette, and pure chromic acid applied to the resulting ulcer. This slowly healed, and in the spring of 1895 the ulcer of the larynx was quite healed. In November the larynx appeared almost normal, the movements being quite free, and there was no trace of swelling or ulceration.

Dr. HALL thought that the only thing to be done was to congratulate Dr. Lack on the success of his treatment. The cords were practically normal, and there was hardly any trace of a scar.

Case of Lupus Pharyngis. Shown by Mr. LAMBERT LACK.

The patient, aged thirty-four, says for several years he has suffered from occasional dry throat, but for seven weeks the condition has been much worse. He consulted a doctor, who noticed a small spot in the centre of the pharynx, which he cauterized, but other spots appearing he sent the patient to me.

The patient has always had good health, has had no special illnesses, there is no history of syphilis, and no tubercular history in his family.

The posterior wall of the pharynx is irregularly nodular, in places red and inflamed, in places abraded, and in others cicatrizing. Caseous scattered nodules can be seen, but no large ulcers.

The condition extends from the level of epiglottis up to the vault of the pharynx. There is no lupus on the skin, in the nose, palate, or larynx. A piece removed for examination shows numerous tubercles with much inflammatory tissue. The treatment has been arsenic internally and the cautery locally, but no sufficient time has elapsed to note the effect.

The case is apparently a very acute one, and in its limited distribution probably a rare one.

Dr. SCANES SPICER could not call the case one of lupus.

Dr. BOND thought it was lupus, and did not consider isolated lupus of the pharynx rare.

The PRESIDENT was of the same opinion.

Dr. PEGLER would like a portion removed and a section made.

Case of Healed Antrum and Frontal Sinus Suppuration. Shown by Mr. LAMBERT LACK.

Patient, F —, aged thirty-two, for about sixteen years has suffered from nasal obstruction, with occasional thick yellowish discharge, and pains over left side of head. The pain she describes as almost constant, and at times "maddening." Eleven years ago some polypi were removed from the left nostril. Patient first seen by Mr. Lack in 1893. She complained then of intense continuous pains above both eyes and in the left cheek, with a yellowish discharge from left nostril. The left nostril showed polypi and pus, the right polypi but no pus. The polypi were removed and the left antrum drilled. The antrum contained pus, but was cured by a few weeks' syringing. The patient was very slightly improved. In 1894 the left frontal sinus was opened through an incision in the line of the eyebrow, the field of operation being bounded by the supra-orbital notch and the pulley of the superior oblique. A large piece of bone was removed by the chisel, and much pus was evacuated. A long rubber tube was passed through the infundibulum into the nose, and retained for about ten days, when it was replaced by a short silver tube. After six weeks all symptoms had disappeared, the tube was left out, and the wound soon healed, leaving an inconspicuous scar under the eyebrow. The patient, nearly two years later, remains well.

Case and Specimen of Cured Polypi of Frontal Sinus. Shown by Dr. H. TILLEY.

Patient was a man aged forty-five, who came to the London Throat Hospital complaining of slight discharge from both nostrils and

occasional frontal headache. Some polypi were seen under the middle turbinate on the left side, which were removed from time to time. A discharge of pus was also constantly seen in this situation.

On further examination a probe could be passed easily into the frontal sinus. The patient was therefore anesthetized, and a vertical incision about two inches long made from the nasion upwards: the soft parts and periosteum were drawn aside, and the anterior surface of the left sinus removed by means of gouge and mallet, when the granulations contained in the sinus bulged forward and looked exactly like hæmorrhoids of rectum. The same was the case with the right sinus. Both sinuses were curetted, and then swabbed out with zinc chloride solution grs. xl. to ʒj, and drainage-tubes were inserted into both sinuses, by means of which the sinuses were irrigated daily with boracic lotion for a week, when the tubes were removed. The wound healed, and the patient is now perfectly free from any trouble, and there is no nasal discharge. The median scar is now almost invisible.

It should be stated that previously to operating on the frontal sinus the maxillary antrum was explored and found healthy.

These two cases were discussed at the same time.

Mr. C. BABER thought that Mr. Lack's case was interesting as having, after recovery, left only a slight scar hidden by the eyebrow. He related a case under his care in which there was protrusion of the eyeball from distension of the left frontal sinus with non-fœtid mucous liquid containing cholesterine crystals. On opening the sinus from the forehead it was found completely cut off from the nasal cavity, where there existed purulent disease of the ethmoidal cells. The case was still under treatment.

Dr. SCANES SPICER would always remove the anterior extremity of the middle turbinate bones before doing anything further.

Dr. WM. HILL had a case which had left a deep scar. He should certainly try operating through the brow, more especially in females.

The PRESIDENT related a case he had with Mr. Horsley, in which a transverse incision was made, a portion of the front of the sinus taken away, and the whole mucous membrane removed. During this operation the hopelessness of operating through the nose was apparent, as it was impossible to get at all the disease through the nose. He asked whether in these cases it would not be possible to fill up the sinuses with foil or something to prevent the falling in of the cavity.

Mr. SPENCER suggested plaster of Paris as being good for filling up bone.

Mr. STEWART thought that plaster of Paris would be too heavy for the frontal sinus.

Dr. DUNDAS GRANT mentioned a case of Waterhouse's in which decalcified bone was used to fill up a hole in the astragalus. He pointed out the difficulty of any bone healing without a drawing in of the cavity.

Mr. LACK thought the opening through the eyebrow caused no deformity. He considered it best to leave the mucous membrane untouched.

Dr. HERBERT TILLEY stated that he had recently examined the

frontal sinuses in a large number of skulls (over a hundred), and that the constant and extreme variation in the size and extent of the sinuses was in favour of an external opening, and he preferred the vertical median incision in the majority of cases. He strongly deprecated any operation from the nose, but thought that syringing the frontal sinuses from the nose, where possible, might be practised for a short time before proceeding to the external operation; if, however, the naso-frontal canal could not be found, no passage should be forcibly made.

Dr. BENNETT suggested that these one hundred and thirty cases were normal skulls. In diseased conditions it was more possible to operate through the nose. He would operate through the nose first to relieve obstruction.

Case of Mycosis of Tonsils and Pharynx. Shown by Dr. SCANES SPICER.

Patient, a man, aged thirty-five, had a well-developed thalloid projection from crypts of left tonsil, posterior pharyngeal wall, and base of tongue. Microscopically it consisted chiefly of cladothira. It had proved very resistant to paints, washes, etc. He proposed dissecting out the affected portion of faucial tonsil, and applying the galvano-cautery to the pharyngeal and lingual crypts.

Dr. HALL recommended the use of the galvano-cautery for the destruction of the mycotic growths. Absolute alcohol had not given good results in his hands.

Dr. BENNETT suggested the application of pure carbolic acid.

Dr. BRADY (Sydney) showed a tonsilotome for removing hypertrophied lingual tonsils. It was an ordinary Mackenzie tonsilotome with the blade curved to fit over the back of the tongue.

Malignant (?) Disease of Larynx. Shown by Dr. FURNISS POTTER.

M. C.—, widow, aged sixty-nine, came to the London Throat Hospital on the 17th March last complaining of difficulty and pain in swallowing (principally solids).

No very definite or satisfactory history obtainable. The patient states she has had difficulty in swallowing for many years, but has been worse during the last twelve months. She has had two children stillborn and one miscarriage.

On examination with the laryngoscope a large red mass occupying the arytenoid region in its whole width was seen; this has increased considerably since the first examination. It bleeds easily on being touched, but there is no visible ulceration. Two distinctly enlarged glands can be felt on the left side of the neck behind the sterno-mastoid. The patient states that she has lost flesh rapidly lately. Dr. Potter thought that there was little doubt the growth was malignant, but would like to have the opinion of members on it.

Obscure Case of Laryngeal Disease. Shown by Dr. DE HAVILLAND HALL.

R. M. V.— was shown to the Society on October 10th, 1894 (*see* Vol. II. p. 6, "Proceedings").

The patient has continued in excellent health, and is able to cycle and dance.

In January, 1896, while at Munich, Prof. Schech detected some pale growths on the right side of the larynx filling up the glottis. These were removed with forceps and curette.

On January 21st a piece of the tip of the epiglottis was removed; very severe hæmorrhage followed. In view of the stationary condition of the laryngeal condition and the patient's excellent health, Dr. Hall was doubtful whether the diagnosis of chronic tuberculosis could still be maintained.

A portion of the growth removed in January will be submitted to microscopic examination.

New Tracheotomy Tube. Shown by Mr. DE SANTI.

This is a tube adapted for patients who have to wear a permanent tube, and who have sufficient space to expire through the larynx though not room enough for inspiration. The tube is fitted with a small metal hollow plug with a small rim below, and in the plug is fitted a metal hinge valve something like a sewer trap: on inspiration the valve opens and the patient breathes through his tube; on expiration the valve closes tightly and air passes through the larynx.

The danger of the valve getting loose is avoided by the metal rim below.

The advantages of the plug and valve are:—

1. That the patient can speak distinctly and without putting his fingers on the tracheotomy tube.
2. That he coughs up mucus, etc., through the larynx and out of the mouth normally.
3. That the patient is able to wear a collar and shirt and go about comfortably.

In Dr. de Havilland's Hall's case shown at this meeting Mr. de Santi has adapted his tube to the case. The patient has worn the tube and plug, which is removable, for six months, is able to talk well, wear evening dress, and bicycle twenty miles a day. He has tried the ordinary pea valve and finds it useless.

If the removable plug becomes at all blocked with mucus, it is taken out and boiled, and in the meanwhile a fresh plug inserted.

It is of course necessary that there should be an opening in the tracheotomy tube in the ordinary place at its greatest convexity.

The plug with its valve fits flush with the tube into which it is inserted.

Case of Abductor Paralysis. Shown by Mr. SPENCER.

Patient, a man aged thirty-five, had worn a tracheotomy tube since June, 1882. He was a soldier who had served in Egypt, and an abscess formed in the neck in the site of a scar at the anterior border of the left sternomastoid just above its insertion. He had felt nothing wrong with his throat, but a few hours after the opening of the abscess he was eating his dinner when he was suddenly attacked by difficult breathing, for which

tracheotomy was done the same evening. Subsequently an attempt to leave off the tube failed. He came concerning a warty growth in the tracheotomy wound, which has been removed. He can speak well with the finger over the tracheotomy tube. The vocal cords are apparently normal, but fixed in adduction; no abduction beyond one to two millimètres can be done.

The affection is doubtless due to syphilis. A nerve lesion there may have been distinct from the above. If perichondritis, it is remarkable that he should have had no throat trouble beforehand.

Chronic Retropharyngeal Abscess in an Adult. Shown by Dr. FELIX SEMON.

The patient, a gentleman aged thirty-seven, had in September last an "abscess" in the throat which took about six weeks to develop, and caused at the time considerable difficulty in swallowing, but apparently no other symptoms. It was opened, a large quantity of matter escaped, and he was then sent on a voyage to South Africa. The incision, however, never healed, and he is still troubled with much secretion, and at the same time a feeling of dryness in the throat. There is an indistinct history of syphilis many years ago, but no secondary or tertiary symptoms have ever occurred.

On examination the posterior wall of the pharynx is enormously swollen, sodden, and reddened, and particularly the right side bulges much forward. There is a longitudinal opening filled with sanious matter at the angle formed between the posterior and right lateral wall, and a smaller fistulous opening near the middle line. The probe introduced into these openings does not touch any rough bone. The swelling extends a long way up into the naso-pharyngeal cavity, the movements of the head are particularly free, the vertebrae are not tender to touch at all; no evidence of any pulmonary affection.

The patient was put on 10 grs. of iodide of potassium, and when he appeared a week after (April 22nd) a diminution of the pharyngeal swelling was noticeable, but no other change. A consultation was held with Mr. Horsley, who agreed that there was no bone affection or evidence of tubercular mischief. The patient is now still taking iodide of potassium. Should, after another three or four weeks, the abscess not close spontaneously, it is intended to connect the two openings by a horizontal incision at the lower part of the abscess, and to scrape out freely the walls of the abscess.

The case is shown because a chronic retropharyngeal abscess in an adult, without any traumatic or diathetic cause known, is exceedingly rare.

A Drawing of a Case of Extrinsic Malignant Disease of the Larynx. Shown by Dr. WATSON WILLIAMS.

A Coloured Drawing of a Case of Early Malignant Disease of the Vocal Cords. Shown by Dr. WATSON WILLIAMS.

Dr. Williams thought that as the disease was intrinsic, localized, and early, it was suitable for radical extirpation after thyrotomy, but the

fact that the patient was seventy-four years of age was considered sufficient to negative such a procedure. The movement of the vocal cords was greatly impaired. The voice had been hoarse two months, and this was the only symptom. There was no alcoholic or syphilitic history. As operation was negatived it was considered inadvisable to complete the diagnosis by removal of a fragment of the growth for histological examination, but he believed that the great impairment of the vocal cord movement, in the absence of any appearance of thickening around the crico-arytenoid joint, pointed strongly towards its being a case of early malignant disease rather than of pachydermia laryngis.

The PRESIDENT did not think it was a case of malignant disease.

Dr. SCANES SPICER thought it was one of pachydermia.

AMERICAN LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL SOCIETY.

Second Annual Meeting, April 17th and 18th, 1895.

President—EDWARD B. DENCH.

*Specially reported for the JOURNAL OF LARYNGOLOGY, RHINOLOGY, AND
OTOLOGY.* By Dr. R. C. MYLES (New York).

The Diagnostic Value of Ophthalmoscopic Examination in Cerebral Disease depending upon Affections of the Ear.

Dr. THOMAS R. POOLEY said that probably the first to call attention to the value of the ophthalmoscope in this connection was Dr. Kipp (Newark). One of the cases reported by him was of special interest. It was one of acute purulent inflammation of the middle ear, with double optic neuritis, but without tenderness, swelling, or spontaneous pain in the mastoid process; opening of the mastoid was followed by rapid subsidence of the optic neuritis. Details of this case were now given.

His own case was one of purulent otitis media occurring in a young boy. He had had otorrhœa for many years, and some years previously Wilde's incision had been made at Buda Pesth. When first seen by the speaker the temperature had been 102.5°, and the pulse 128. Wilde's incision was made, and was quickly followed by a subsidence of the temperature, but another rise of temperature occurred the next day. Schwartze's operation was then performed, and about a drachm of foul, gaseous matter removed from the antrum. During the operation a considerable part of the surface of the dura was exposed in the wound. For twenty days the temperature oscillated between 101.5° and 105.5°, and the patient showed occasional maniacal excitement. At the end of this time the patient became blind in the right eye, and the ophthalmoscope

showed impaired vision on the right side and violent hyperæmia on the left. Hemiplegia then developed, and soon afterward the patient died. At the autopsy the vessels of the dura were found to be intensely engorged, and there was a layer of thick, foul-smelling pus which bathed the left hemisphere. The optic nerve was swollen. The cerebellum was normal. A large encapsulated abscess was found in the anterior portion of the occipital lobe of the left side, and around this the brain was softened. It was found that the dura had not been perforated at the mastoid operation.

The following conclusions were drawn:— 1. That the ophthalmoscope was valuable in arriving at the diagnosis of cerebral disease, in some instances by confirming the evidence given by other symptoms, in others by giving the principal if not the only reliable evidence of brain disease. 2. The intra-ocular end of the nerve is never inflamed where the disease remains limited to the middle ear and mastoid, but is certain evidence of brain disease. If, therefore, optic neuritis is found, the diagnosis of extension to the brain is certain, whether or not there are other evidences of this condition. 3. The form of optic neuritis is always that seen in affections of the brain, viz., choked disc—and this may vary from simple evidence of stasis to the pronounced choked disc. In his opinion the various forms of neuritis described were only different degrees of this particular form of optic neuritis. The presence of optic neuritis was unfortunately no aid in the solution of the problem of determining the localization and nature of the disease. 4. It occurs more frequently in chronic purulent otitis media than in acute cases. In the latter it is very rare. 5. The list of brain lesions in which optic neuritis is observed embraces nearly all the usual lesions. 6. The occurrence of optic neuritis in otitis media chronica, with implication of the mastoid and a history of long-standing otorrhœa, is, by inference, due to a cerebral abscess. 7. The extent to which the presence of slight œdema of the optic disc should influence us in determining the operation on the mastoid was an open question, but he thought we might accept Andrews' conclusions, that as the operation, when properly performed, is not dangerous, we may accept œdema of the optic disc as an indication for opening the mastoid, with the object at least of establishing free drainage from the middle ear. 8. The existence of optic neuritis as an indication for more serious operation, such as an exploration of the brain for intra-cranial disease, could only be considered in connection with other symptoms, but so far as it went it made the presence of intra-cranial disease more certain.

Dr. J. HERBERT CLAIBORNE said that the conclusion presented in the paper covered in a succinct manner nearly all that was known on the subject. Many did not perform the mastoid operation in the manner that Schwartze did. Of this he could speak positively, because he had studied at Schwartze's clinic. In none of the cases seen there had there been any symptoms pointing to ocular trouble. In Berlin he had seen for seven weeks an interesting case— one of chronic purulent otitis media. The patient suddenly developed a high temperature and delirium, and had died before morning. The autopsy showed that the pus had passed

through the tegmen tympani into the meninges of the brain, and had excited purulent meningitis. It seemed to him that the optic neuritis could hardly be a reliable guide as to the best time to allow the wound to close; the ordinary guide in practice was whether or not the wound was healing properly from the bottom. He doubted whether optic neuritis would prove to be a trustworthy guide to the necessity of operating.

Dr. POOLEY said that he did not wish the conclusions to be accepted as entirely his own; they had been intended to represent rather what had been gleaned from the literature on the subject. He felt sure, however, that optic neuritis would be found much more frequently if the physician took the trouble to look for it. The percentage of cases in which the eye is affected in purulent middle ear disease had not yet been determined.

Report and Exhibition of a Case of Unusual Speech Defect.

Dr. G. HUDSON MAKUEN (Philadelphia) presented a case of this kind in the person of a young law student. When six months old this young man had lost the sight of one eye: when seven years old he had had a severe attack of diphtheria, and another at the age of twelve years; and he had had scarlatina at the age of ten. The purulent otitis media had existed since the scarlatina. In 1893 there had been an acute suppuration of the attic and aggravation of the old trouble. Adenoid vegetations had been removed on two occasions, with considerable improvement of speech after each operation. There was a marked retraction of the lower jaw, which destroyed the character of the labial sounds, and this had been overcome by practice in protruding the lower jaw when speaking. The soft palate was greatly relaxed and impeded in its action by the adenoid growths. In trying to say "s," instead of the palate rising to the roof of the mouth, it remained down on the tongue, and the sound was made through the nose. After the thorough removal of a large mass of adenoids for the second time, the patient was carefully drilled in articulation until scarcely a trace of the defect remained.

Dr. H. HOLBROOK CURTIS (New York) exhibited the instrument known as the *Laryngo-Stroboscope*, devised by Professor Oertel, of Munich, for viewing the vibrations of the vocal cords. The instrument is constructed on the principle of the well-known siren, and is set in motion by an electromotor. If, for example, the siren and the patient are made to sing the same note—say C—there will be 312 vibrations of the vocal cord per second, and the same number of interruptions of the visual field by the siren; under these conditions the observer will see the vocal cords apparently at rest. By looking slowly from one side of the cord to the other, and properly adjusting the speed of the instrument with reference to the note sung by the patient, the observer is enabled to see the nodes and segments of the entire cord. By this instrument, the speaker said, the usually accepted theories as to the manner of vibration of the vocal cords had been absolutely disproved. With this instrument, the "nodules of attrition" could be seen, and the patient could be taught by a new method to sing in such a way as to remove the vocal difficulty arising from these nodules often inside of a week, even in cases of very

long standing. The patient should be given a suitable note to sing, and should practise singing this note according to a certain method at short intervals every day. In this way a very speedy cure of the nodules themselves is brought about.

Dr. CURTIS also exhibited an *Auroscope* invented by Dr. Muller, of Carlsbad, in which an electric lamp was included in the speculum, which enabled the observer to study the movements of the ossicles under intense illumination, a hand bulb of rubber being attached as in the auroscope of Ziegel.

Otitis Media Suppurativa with an Unusual Perforation of the Mastoid.

Dr. E. E. HOLT (Portland, Me.) reported a case of this kind occurring in a man forty-five years of age, who had begun to have earache on June 22nd, 1895. When seen by the speaker on July 30th there was a perforation on the anterior inferior portion of the membrana tympani through which muco-purulent matter was discharged. He complained at times of pain and tenderness. The ear was treated with cleansing astringent solutions. There was no tenderness or swelling of the mastoid, but there appeared to be a slight prominence in this region. There had been a very slight rise of temperature at times. After twenty-one days of this treatment he had decided to chisel away the mastoid, and on doing so he had found the outer side of the bone sound, but the inner portion extensively necrosed, and a pus track leading into the digastric fossa and down into the inter-muscular spaces in the neck. The speaker deprecated the common practice of dismissing a patient with the simple direction that the ear should be frequently syringed out; it was much safer and better, if the case could not be kept under constant observation, to direct that the ear be kept clean with cotton and not syringed at all.

The PRESIDENT said that these cases opening into the digastric fossa were among the most interesting with which we had to deal. He had recently seen a case very similar to the one reported. Although the temperature had been taken at intervals of two hours, no elevation of temperature was recorded while the patient was under observation. At the first incision pus was evacuated, and it was found that the interior of the mastoid was entirely broken down. The only symptoms of mastoid inflammation in this case were local tenderness and a sinking of the upper and posterior walls of the canal. His own experience had been that patients were apt to infect the auditory canal in using cotton to cleanse the parts. While it was usually unwise for a patient to syringe out his own ear, one of the family could be easily taught to do it properly, and this method of cleansing had always been the most successful in his experience.

A Contribution to the Study of Laryngeal Vertigo.

Dr. A. C. GETCHELL (Worcester, Mass.), in a paper with this title, stated that he had succeeded in collecting forty-one cases. Five of these were over sixty years of age, nine were between fifty and sixty years, thirteen were between forty and fifty years, and the others were stil

younger. One was epileptic, and one had an epileptic brother. Loss of consciousness was expressly stated to have occurred in thirty-two cases, and falls in twenty-six. Slight mental confusion was noted in five: dizziness was mentioned in eight cases; true vertigo was mentioned but once. In thirty-three of the cases it was preceded by cough. Tickling or burning sensations about the larynx were mentioned in thirteen cases; congestion of the face was noted in ten; two were reported as pale: bronchitis occurred in eight cases. Most of the cases had several attacks, although sometimes at quite long intervals. The treatment had consisted in the internal administration of the bromides, and local measures for the abnormal conditions about the pharynx. The speaker said that Charcot had first described the disorder and had given it its name, but this certainly did not give a correct notion of the disorder. The average age of the patients was against the theory of its epileptic origin. If the theory of forced expiration were correct, it would seem that obstruction of the circulation should be noticed prior to the attack. The circulatory condition is probably nothing more than an exciting cause in a limited number of cases. Five of the series had nervous temperament. A history of epileptic seizures was not infrequent. It could not be denied that the fundamental pathological factor is an unstable condition of the nervous system. Brown-Séquard's researches showed that the larynx has an intimate nervous connection with the nervous system. The author's conclusions were: (1) That laryngeal vertigo occurred in persons in whom there is an unstable nervous equilibrium; (2) that there was usually some condition of the upper air passages liable to cause glottic spasm; and (3) that severe paroxysmal coughing may cause syncope, but only when there is existing disorder of the central nervous system.

Dr. SARGENT F. SNOW (Syracuse) said that he had seen a case of laryngeal vertigo or epilepsy in a labouring man, about forty years of age, who was sent to him in 1893. The friend who accompanied him said that for the previous two or three weeks there had been extreme hoarseness and dyspnoea; along with this there were frequent attacks of laryngeal spasm, and a complete loss of consciousness for a period of perhaps thirty seconds. The patient himself was too hoarse and excited to give his own history. During the first examination he lost consciousness five or six times, as a result of the contact of the mirror with the back of the throat. The pharynx and larynx were markedly congested, cords reddened, and arytenoids swollen. His family physician had been treating him with bromides, but without permanent benefit. This, by request, was stopped, and the only treatment he received was in the way of reducing the pharyngeal and laryngeal inflammation. Under this plan of treatment all his symptoms disappeared and did not return. From his history, the symptoms of laryngeal congestion and spasm, the extreme loss of voice, and nice result from treatment, Dr. Snow came to the conclusion that it was a typical case of laryngeal epilepsy, due to an acute inflammation.

Dr. WENDELL C. PHILLIPS (New York) said that the only case of this kind that had come under his notice (*see* "Medical News," March 19, 1892) had been a patient with a well-marked bronchitis with bronchorrhœa.

All the laryngeal attacks had begun with a severe spell of coughing, and then he would fall down and completely lose consciousness for a moment. He had treated the bronchitis with eucalyptol internally; he had also given sodium bromide. There had been no vertigo during attacks, but during a paroxysm there had been sudden and complete loss of consciousness for a few seconds. Patient had described the sensations as pleasurable, and no unpleasant after-effects. Recovery was complete after a few days.

Dr. R. C. MYLES (New York) said that he had seen an interesting case of this kind a few years ago in a man about fifty years of age. This man was subject to attacks of bronchitis and coughing, and at such times would occasionally become unconscious for a moment and then fall. He was a high liver. His diet was somewhat restricted, and treatment directed to the larynx; under this a cure was effected. It should be noted that in all cases of death from impaction of a foreign body in the larynx, the individual falls unconscious with great suddenness.

Deviation of the Nasal Septum. Operation.

Dr. WENDELL C. PHILLIPS (New York) presented a boy who, while playing "shinny," was struck with a stick over the nose. This caused a severe nasal hæmorrhage, which subsided without special treatment. Seven months later he had been first seen by the speaker. Examination showed almost complete occlusion of both nostrils, as if the blow had caused the septum to be driven back upon itself, or split and forced in both directions. Four weeks ago he broke up the septum completely with the Adams forceps under ether, and introduced the perforated cork splints devised by Dr. Berens. It was necessary to use two on account of the bilateral obstruction. There was still a little thickening of the septum, but scarcely enough to interfere with breathing, and the case might be considered satisfactory.

Dr. C. W. RICHARDSON (Washington, D.C.) said that he had operated upon a number of cases of V-shaped deflections of the septum, but he had found in ninety per cent. of the cases that the septum would drop back into the old position. Since he had used the perforated splints of Dr. Berens the result had been very good. The reaction from the introduction of these splints usually subsided in three or four days.

Dr. D. L. HUBBARD (New York) said that the great point was not to be in a hurry to remove these corks. He had frequently left them in ten days without any harm. Another point was not to leave out the corks permanently too soon. He had found that relapse had sometimes followed removing them after four weeks, but never if they had been left in for six weeks.

Dr. HOLBROOK CURTIS said that he considered this splint the most scientific and useful of the splints devised for this purpose. After doing one of these septum operations lately, he had been surprised to find that the patient was a "bleeder." The hæmorrhage was stopped by a very light plugging with styptic cotton. He believed that light plugging and pressure with a flat copper wire at the right spot constituted the best

method of checking such hæmorrhage, if the splint itself did not accomplish this result.

Dr. E. W. DAY (Pittsburg) said that once while operating under ether he had met with a tremendous arterial hæmorrhage after the first incision of the septum, and the patient had nearly lost his life from it. He preferred now to operate under local anæsthesia.

Dr. PHILLIPS, in closing the discussion, said that Dr. Asch recommended cutting the septum at the point of greatest deflection, by means of a specially devised pair of knife-scissors, making an incision like this, +, then breaking up with the finger the four resultant segments, and following with complete breaking up with Adams forceps. The trouble in Dr. Day's case was probably that he cut too close to the floor of the nostril. In ordinary cases he saw no necessity for using two splints, and had seen ulceration and perforation of the septum result from undue pressure, brought about by the prolonged use of *two* splints.

Dr. MYLES presented a *Case for Diagnosis* which exhibited some of the features of actinomycosis bovis. It had been under his observation only a few days. He said that he had seen several cases of true actinomycosis bovis, and most of them had been examined microscopically, so that there could be no doubt about the correctness of the diagnosis. They had been cured by extirpation of the growths. The growths appear hard, tough, and leathery, like the lichen on wood.

Report of a Case of Hæmorrhage from the External Auditory Canal.

Dr. C. W. RICHARDSON (Washington, D.C.) reported such a case. The patient was a woman, thirty-six years of age, who had at first hæmorrhages lasting for a day or two, and recurring at intervals for a week or more. This continued for a period of six months. In February, 1895, the bleeding became profuse and persistent. It had no reference to the menstrual function. Examination showed no solution of continuity throughout the whole canal, or of the membrana tympani. The Eustachian tube was patulous. Pain was experienced throughout the whole history of the case, particularly in the region over the mastoid and about the auricle. After several months of observation he had become convinced that the patient was neither hysterical nor a malingerer. The exact source of the hæmorrhage could not, however, be determined; although, in all probability, issuing from the ducts of the ceruminous gland.

Dr. POOLEY referred to a case of hæmorrhage from the auditory meatus which at first was puzzling, but it was finally found that the blood issued freely from a perforation in the drumhead. Further examination showed petechial hæmorrhage in different parts of the body, and the diagnosis of scurvy was made. The case terminated fatally, and the autopsy showed the usual conditions found in scurvy, including petechial hæmorrhage into the brain.

The PRESIDENT said that the tenderness along the trigeminal distribution would seem to indicate that the case reported was of the nature of herpes—in other words, that the hæmorrhage occurred through some interference with the nutrition of the walls of the blood vessels. A somewhat similar condition was found among gouty individuals.

Dr. RICHARDSON said that the blood had been examined, but with negative results. There was no indication of scurvy in his case, or of the hæmorrhagic diathesis, as the patient had been operated upon previously for pelvic growth without the occurrence of unusual hæmorrhage.

Hysterical Affections of the Mastoid.

Dr. J. E. SHEPPARD (Brooklyn) read a paper with this title. The first case reported by him was that of a girl, eighteen years of age, in poor health, who came to him with the history of deafness for three years, and of pain and tenderness around the right ear for the past three weeks. Bone conduction was better than aerial. If the patient's attention was diverted, firm pressure could be made over the part without causing pain. The patient was given sodium bromide, and in a few days was well. The second case was that of a young woman, twenty-one years of age, who had fallen down an elevator shaft. Recently she had felt dizzy, and had exhibited a tendency to fall backward to the right side. She complained of pain around the ear. The mastoid region appeared to be tender, but not at all cedematous or swollen. A proposition to operate did not lessen her symptoms at all, and for several days he had been in doubt as to the correct diagnosis. Two sances of partial hypnotism produced a cure. The third case was a woman, twenty-three years of age, who stated that for the past few months, following a cold, she had suffered from pain in and around the ear, without any discharge. Examination showed no evident cause, and the diagnosis was made of hysteria, and her attending physician was advised to treat the case by "suggestion." He had been unable to learn the outcome of this case.

Dr. RICHARDSON said that not long ago he had operated upon a case of this kind. The patient was a young woman, about eighteen years of age, who had been treated six years ago for suppuration of the right ear. When seen again the ear was once more suppurating, and there was extreme tenderness over the mastoid region. She had become hysterical as the result of grief over the death of her mother. There was no œdema or redness over the mastoid, but it was well known that there were cases of serious mastoiditis without the usual signs. After waiting about two weeks he had opened the mastoid cells, only finding them perfectly normal. The patient was, however, completely cured. The differential diagnosis when suppuration exists in the middle ear of the affected side becomes exceedingly difficult.

Dr. MYLES referred to the case of a young lady, in most comfortable circumstances, who had suddenly developed extreme tenderness in the mastoid region. The girl was hysterical, and he had some reason to suspect that she purposely irritated the ear. The girl was greatly pleased with a proposal to open the mastoid, but after consultation this was postponed, and the patient recovered without further treatment.

Dr. PHILLIPS recalled a case of recurrent furunculosis of the canal, and finally of severe pain and tenderness in the mastoid, lasting three or four weeks. She complained of the pain so severely that she was admitted into the hospital, and preparations made for opening the mastoid. Ice coils were used and leeches also, but the tenderness still existed, and she

said she could not sleep. There was no swelling at any time, and finally the apparent tenderness became so general over the affected side that no operation was performed, and at Dr. Terriberry's suggestion she was given Warburg's tincture in full doses : she was relieved and discharged. A few days later she returned in great pain, and an examination of the canal showed about five-eighths of an inch of the point-end of a pin and several pieces of finger-nail near the drum. When confronted with this she was greatly surprised, but denied all knowledge of it : but it was evident that she had forgotten this time to remove the cause of her self-inflicted torture. It was also learned that she had been forced to earn her living, and had no doubt taken this method to avoid work.

Dr. J. E. H. NICHOLS said that, in one case which he had seen, the mastoid cells were healthy, but the patient had been cured at once by opening them. In another case, in which there was an excoriation of the anterior wall of the canal, and in which he suspected that the hæmorrhage complained of had been produced by pricking this spot with a pin, hypnotic suggestion was only temporarily beneficial, but a proposal to operate was sufficient to effect a cure. It was not at all improbable that there might be some elevation of temperature in these cases, thus still further obscuring the diagnosis, but ordinarily this elevation would be slight.

The PRESIDENT remarked that in this discussion nothing had been said about the result obtained by comparing the two sides. In hysterical cases, in which pain was complained of on one side, there was usually much tenderness on the other side. He recalled a case in which at each menstrual epoch there would be a marked œdema and tenderness over the mastoid. Such a condition must be looked upon as angio-neurotic in character.

Pharyngeal Tuberculosis.

Dr. ROBERT LEVY (Denver, Colo.) said that he had preserved records of one hundred and sixty-two cases of laryngeal tuberculosis. Of this number, seventeen showed pharyngeal tuberculosis. Ulceration of the hard palate was the least frequent. The severity and course of this affection depended upon the number and location of the areas affected. When several points of attack develop simultaneously, or there is an extensive process going on in the lung, the process is rapid : when the posterior wall alone is involved, extension is slow. The co-existence of syphilis he considered to be the most important modifying circumstance. The stages of pharyngeal tuberculosis depended upon the mode of infection. When the infection occurred through the lymph channels, pallor, infiltration, tubercles, ulceration seemed to be the method of attack ; where there was a local invasion, there would be an acute pharyngitis, the development of superficial pin-head tubercles, no diffuse infiltration, ulceration. The diagnosis was not difficult in typical cases. In those complicated by syphilis the character of the ulceration might be puzzling ; there would usually be slight pain, and the case would pursue a sluggish course. The finding of tubercle bacilli, the condition of the lungs, and the result of treatment would enable one to make the

differential diagnosis. Nitrate of silver, forty grains to the ounce, was useful in the early stage, when the ulcerations were few and small. Curettement and lactic acid had given him fair satisfaction, but the galvano-cautery had proved to be the best of all the agents he had employed. Cocaine spray and iodoform insufflation were valuable for home treatment. When combined with syphilis his experience was in favour of the use of mercury and small doses of iodide of potassium, rather than large doses of the latter. He had been forced to the conclusion that the Colorado climate was unfavourable to pharyngeal tuberculosis. His conclusions were:—(1) That pharyngeal tuberculosis occurred in one and a half per cent. of all cases of phthisis. (2) That there are two sources of infection: (*a*) local attack on an abnormal mucous surface, and (*b*) through the lymph channels. And (3) that the severity of the symptoms was modified by the site of the attack, and the existence of laryngeal and pulmonary complications and the association with syphilis.

Diseases and Treatment of the Nasal Accessory Sinuses, with an Analytical Report.

Dr. ROBERT C. MYLES exhibited some drawings taken in a darkened room in 1893 by means of transillumination. These had been presented to the Academy of Medicine in 1893. In polypoid cases he had entered the sinuses through the nose many times. About two-thirds of the cases of ethmoid disease were due to polypoid disease, and one-third to atrophic rhinitis, non-syphilitic necrosis, syphilis, and neoplastic growths. At the present time he had three cases of sphenoidal empyema under treatment, and he had come to the conclusion now that the nose and teeth were about equal as causal factors of antrum disease. The simple irrigation tube and small trocar and canula he considered invaluable aids to diagnosis. Less depends upon the pathology than upon the extent of the pathological process. He thought it was the physician's duty, in all acute and sub-acute cases of catarrh, to employ either expectant or exploratory treatment. Exploration in antral cases is carried out by irrigation through the natural opening, or through a small artificial one. There were hundreds of cases of sinusitis with muco-pus in which there was no solution of continuity of the membrane. He had operated by almost every method that had been recommended, and all the milder cases had done well. He recalled a case which terminated fatally in which death might have been averted by an operation, which the patient had refused. He had adopted the rule of operating externally in frontal sinus disease when the symptoms were profound, and were not relieved by other methods. In extreme polypoid cases the ethmoid was rather brittle; it was almost flinty hard in the suppurative cases. After removal of the middle turbinated bone it was his practice to drill or gouge an opening into the cells, and cut away as much of the cells as possible. All his cases had been relieved in this way, and some cured. The sphenoid cells were not so difficult to open as many seem to think. He did not believe curetting the upper and posterior wall of these sinuses was safe. The cells were from one to one and a half inches in depth.

He did not agree with the general surgeons that the antrum of Highmore should be treated as other diseased cavities are treated. Curetting often aggravated rather than helped the condition. Where the tooth appears to be the cause of the trouble he advised removal of the tooth, and penetration through the socket into the antrum. This method was so simple and harmless that it should be made a part of the expectant treatment.

Dr. PHILLIPS said that he quite agreed with the reader of the paper regarding the etiology of antral disease. He found that the dental profession was very much inclined to follow the teaching of Garretson, that almost all antrum cases were due to some defect in the teeth or in the bone. In his opinion catarrhal inflammation of the antrum was not an infrequent disease, but suppurative inflammation of the antrum was more rare. He did not think it necessary to remove a tooth if the teeth were perfectly sound; it was better to penetrate through the canine fossa. His most recent case had been one without complication from teeth or jaw. The only symptom complained of was that daily, at about ten o'clock, he had a quite free discharge of slightly offensive pus from his right nostril. It was learned his occupation was that of a watchmaker, and that while at work he bent his head downwards and forwards. This condition had lasted about a year, and had followed a cold. Examination of nose was negative; percussion over the antrum of the affected side elicited some tenderness as compared with the opposite side. By transillumination he had found that there was a bright area underneath the eye on the left side, and a very dark shadow underneath the eye on the right side.

Some observers claimed that transillumination was unsatisfactory, but the reason usually was that it was not properly performed. The observer should note the character of the illumination beneath the eye, the appearance of the light low down being always negative. He would be unwilling to operate in a case with darkness on one side and light on the other side, unless there were other symptoms of antrum disease, but in this obscure case the transillumination had been most helpful. Transillumination is a useful aid, but should not be considered in itself sufficient ground for a positive diagnosis. Cocaine cataphoresis was used in this case, with a current of fifteen volts. A free opening was made into the antrum, and according to the statement of the man the operation was painless. There was a free discharge of pus. Last summer he had seen a man who had rapidly developed an acute sinusitis in the frontal sinus, together with extensive suppurative periostitis over the frontal region, following a violent insufflation of powder on that side. This insufflation had been done by one of the advertising quack catarrh cures in this city. Patient also gave a clear syphilitic history. He had extensive polypoid development in both nares. An external incision had been made to relieve the extensive cellulitis, and pus was found, and a final sinus into the cavity was left, which had continued to discharge. This was underneath the supra-orbital foramen; operation was consented to, and he had followed Dr. Myles' plan of making the incision. As soon as the opening was sufficiently large the polypi forced themselves out through the opening that he had made in the frontal sinus. He removed nearly half an ounce

of polypoid material from the sinus and packed with iodoform gauze, and the usual treatment was carried out. Scarcely any deformity followed this plan of opening the sinus. Recently he had been operating upon a cadaver of a coloured person, and had been surprised at the extreme smallness of the sinus. It did not extend beyond the supra-orbital foramen, and an attempt to have entered this sinus by the nose would no doubt, have entered the cranial cavity.

Dr. G. H. MAKUEN said that a few weeks ago he had reported a case of unusual alveolar abscess with antral complications. The patient had complained first of pain around the second molar tooth in the upper jaw on the right side. After two or three days a slight sero-purulent discharge made its appearance between the gum and the tooth. A dentist who saw the case gave it as his opinion that the case was one of alveolar abscess. On opening the tooth he found it apparently healthy. The tooth was devitalized and the pulp removed, but without benefit to the patient. Shortly after this, while probing, the dentist passed his probe into the antrum. On removing the tooth a small pus sac was found midway on the tooth. This sac was half an inch from any infection by way of the mouth, and certainly no infection could have come through the antrum. His experience had been that, when a large opening was made at the floor of the antrum, the cavity did not drain through this opening unless there was an obstruction of the natural opening. He suspected that the movements of respiration caused a suction through the nose, and thus accounted for drainage taking place against the action of gravity.

Dr. E. E. HOLT said that he desired to express his high admiration of this paper from the standpoint of the ophthalmologist and otologist. In cases of orbital cellulitis one was often brought into contact with the antrum of Highmore.

Dr. DAY said that he had found quite a number of cases in which transillumination showed a shadow on both sides, and sometimes on one side, without any other indication of antrum disease. He had, therefore, become somewhat sceptical as to the value of transillumination in diagnosis.

Dr. MYLES, in reply, said that there were thousands of people in this country who had been suffering for years from catarrh, and from antral disease, and yet they had been treated by very competent physicians. The remark that had been made about the smallness of the frontal sinus reminded him of the fact that some coloured people seem to have no frontal sinus, or only a very small one. It was an easy matter in such cases to make an opening directly into the cranial cavity, inadvertently, while operating. In his experience, most of the cavities of the nose appeared to drain by a to-and-fro motion of the air, due to the respiratory movements. Regarding the matter of transillumination, the speaker said that hundreds of people presented a dark shadow beneath the eyes, but in almost any case the shadow could be made to disappear by the use of sufficiently powerful illumination. There were many drawbacks to transillumination, but it was, nevertheless, a very valuable aid to diagnosis and one which should not be neglected.

Acute Otitis Media as a Complication of Typhoid Fever.

Dr. D. A. HENGST (Pittsburg) read a paper on this subject. He said that when we considered the convenient pathway for microbes through the Eustachian tube to the ear, it was not surprising that this affection was so common. As a result of a collective investigation that he had made, he had received reports of 1228 cases of typhoid fever, 575 of which were from private practice and 653 were hospital cases. There were eleven cases of otitis media reported among the former number, and seventeen from the latter. Out of 389 cases of typhoid fever occurring in the John Hopkins Hospital, it had been reported that there were eight of acute otitis media. It most commonly developed from the end of the second to the fourth week, or at the time when the capillary circulation was sluggish and the patient in a semi-comatose condition. He had not been able to gather statistics regarding the frequency of mastoid complication. In connection with the question of the influence of quinine on the production of otitis media, it should be noticed that one physician who reported 175 cases of typhoid fever, with five of otitis media, stated that it was his practice to use large doses of quinine during the stage of hyperpyrexia. The most useful method of extension was from the mouth or naso-pharynx into the ear. The chief symptoms of this complication were deep-seated pain and tenderness on pressure below the auricle, a feeling of pulsation, and also tinnitus. In some cases of typhoid fever there is severe neuralgic pain in the ear, but there is no deep-seated pain on pressure below the auricle, and the accompanying changes observed on examination with the speculum are not present. If seen early, or in the hyperæmic stage, leeches should be applied to the tragus, and the instillation of a warm solution of boric acid will often be followed by prompt relief. The ear should be frequently cleansed, and as soon as bulging is observed the membrane should be incised. The parts should be kept thoroughly aseptic afterwards. In nearly all cases of otitis media complicating typhoid fever, good hearing has been the result.

The PRESIDENT said that he certainly thought acute inflammation of the middle ear was a very rare complication of typhoid fever. He did not believe in the use of moist heat in the early stage of the inflammation, because this tended to break down tissue. In his experience dry heat relieved the pain quite as well as moist heat, and was free from the objection just stated. He would also favour incision of the drum membrane before the membrane bulged, as the object was largely to secure depletion. A great variety of germs appear to be responsible for acute inflammations of the middle ear.

Ulceration of the Nasal Septum.

Dr. T. C. CHRISTY (Pittsburg) read a paper with this title. Five cases from his private clinic were given in detail. He said that the onset of the trouble was usually attributed to taking cold, followed by pain over the frontal region, obstruction of nares, painful vision, abolition of sense of smell, and by pain in one or both ears. There were usually signs of acute inflammation over the obstructed nares. In the majority of these cases the lesion originated on the septum, and was communi-

cated to the swollen soft parts by contact. The sodden, macerated appearance of the tissues involved, the thick, slimy discharge, tendency to hæmorrhage, the marked physical depression of the patient, were among the more prominent symptoms. In one case only was there evidence of specific infection. In one case there was inflammation of the septal cartilage with necrosis of the alveoli of the central incisors, resulting in a sinus communicating with both nares. There was no appearance of infection outside of the nares except in one case, causing acute laryngitis, with threatened periostitis of hard palate. In no case was there destruction of the hard palate, as so frequently occurs when the septum nasi is involved. Constitutional remedies, even in small doses, were poorly tolerated in those cases of great physical depression. The galvano-cautery is not a valuable agent in the treatment of these lesions. Tubercular ulcers are, as a rule, secondary, slow in development, and painful. Malignant ulcerations are painful, and often of an inflammatory appearance and primary origin. Luetic ulcers do not invariably bear the typical impress. The nasal septum is exceedingly vulnerable to the pernicious influence of the acute and chronic infectious diseases, and in a lesser degree to any atrophy and exsiccation of its mucous surface by reason of disease or traumatic injury. His observations led to the conclusion that prolonged residence in high altitudes was, in some instances, pernicious to the delicate mucous covering of the septum nasi.

Dr. LEVY said that he must take exception to the statement that prolonged residence in high altitudes was pernicious to the nasal mucous membrane. In an experience of twelve years in a region situated over one mile above the level of the sea, drying, crusting, and annoying nasal symptoms had been observed most often among those who had recently arrived. After a time nature met the demand for rapid evaporation of water at such high altitudes, but at first these individuals usually suffered from dryness and excoriation from picking the dried secretions.

Dr. ARTHUR G. ROOT (Albany) said that he knew of no disease which was so amenable to treatment as specific disease, whether in the nose or in any other part of the body. He was firmly convinced that many physicians were disappointed with the results of their antispecific treatment because they expected marvellous benefit from simply giving of these remedies, without taking into account the general condition of the patient and what could be obtained by careful hygiene and good nourishment. Some of these patients would be better for a time if the antispecific remedies were suspended, and reliance placed entirely in hygiene and diet.

Dr. SNOW said that in these cases of tertiary syphilis much of the trouble in managing the case was due to insisting upon the use of mercurials, instead of trusting entirely to the iodide of potassium. He stated that he had yet to see a case of ulceration due to the later stages of syphilis that could not be controlled by iodide of potassium, pushed to the point of intolerance. In cases of ulceration of the septum, not due to syphilis, he found that careful applications of deliquesced chromic acid acted admirably.

Dr. HOLT said that he desired to heartily endorse what had been said by Dr. Root about the hygienic treatment of syphilitics. In many cases he had got better results from iodide of sodium than from the iodide of potassium, the former being better tolerated by the stomach.

Dr. W. B. JOHNSON (Paterson, N.J.) thought it was somewhat dangerous to undertake to feed up a syphilitic patient, and suspend medication while the disease was actively engaged in dragging him down. He was positive that the combination of iodide of potassium and mercury often acted better than iodide alone.

Dr. MAKUEN said that in the past year he had two such cases, in which the diagnosis had been rather difficult. The first was a young woman in whom there was no suspicion of syphilis. A pathologist reported that the case was one of round-cell sarcoma, but the operation being unavoidably delayed, the patient was put on antisiphilitic treatment and was speedily cured. In another case—that of a man who denied syphilis—he was still in doubt, but was trying antispecific remedies.

Dr. LEVY said that he was reminded of a case in which two microscopists had independently examined the case, and had reported it to be one of round-cell sarcoma. This patient had had many of the symptoms of a malignant growth, yet she was speedily cured by antisiphilitic treatment.

Dr. CHRISTY, in closing the discussion, said that the object of his paper was to emphasize the importance of preserving in every way possible the integrity of the mucous membrane of the nose in all cases, whether surgical or non-surgical.

The Mastoid and Intracranial Complications of Middle Ear Suppuration.

Dr. EDWARD B. DENCH (New York) read a paper with this title. In describing the operative treatment of mastoid disease he said that he considered that a mastoid operation, done with proper attention to technique, was perfectly justifiable as an exploratory procedure, and was devoid of danger. He had operated upon 105 cases of mastoid disease, of which five had died. Three of these were cases in which meningitis, occurring before the operation, was the cause of death. The other two were due to prior cerebral abscess.

In this large number of cases, therefore, not a single death could be attributed to the operation. An absolutely perfect asepsis should be secured, as much care being taken as in preparing for an intraperitoneal or an intracranial operation. The incision was ordinarily made about half an inch behind the auricular attachment, but personally he preferred to begin the incision at the tip of the mastoid, and then carry it toward the insertion of the auricle, following this line close—at a distance of about one-eighth of an inch. The incision should be carried up to the superior attachment of the auricle. Within the triangular space bounded by two tangents, one drawn to the superior wall and the other drawn to the posterior wall, and the curvilinear border of the meatus between the points of tangency, lay the region in which the antrum could be entered with safety. Drilling should be abandoned, and the opening into the

bone made by a chisel. So far as he knew, E. Gruening had been the first to lay down definite rules for the systematic opening of the mastoid. The first objective point in the operation should be the mastoid antrum. After a probe had been passed from the antrum into the middle ear it was necessary to remove the tip of the mastoid and thoroughly explore all the pneumatic spaces of the process. The *aditus ad antrum* should be carefully curetted, for otherwise the discharge from the ear was apt to persist after the wound had healed. If the incision were made too far behind the auricle the ear was apt to remain displaced forward for a long time. This was not the case when the incision was made as recommended. In applying the dressing the bone cavity alone should be packed, the margins of the wound in the soft parts being allowed to approximate. If there were no pain or elevation of temperature, he allowed the first dressing to remain unchanged for from five to seven days. If the lateral sinus should be opened the hæmorrhage could be easily controlled by firm packing with iodoform gauze. The speaker also reported a successful case of operation in a patient having leptomeningitis. An incision had been made from the tip of the mastoid over the ear to the external angular process of the frontal bone. He had then entered the middle cranial fossa through the squamous portion of the temporal bone. There was a distinct meningitis present at this time, the lesion being most marked over the tympanic roof. There was no purulent accumulation found either in the region of the roof of the tympanum or the lateral sinus. The wound was packed in the region of the tympanic roof, the two extremities of the incision being closed by sutures. The man had no further trouble, and recovery had been prompt. In doing an ordinary exploratory operation an ample cutaneous incision should be made, and the middle fossa entered through the squama, over the external meatus. In a second case, in which the symptoms did not at first seem to indicate extensive mastoid involvement, evidences of thrombosis of the lateral sinus appeared suddenly. The patient had a severe chill, the temperature rose to 105·8° Fahr., and there was intense headache, delirium, and marked prostration. The febrile movement was followed by a spontaneous fall of temperature to about 99° Fahr. In a few hours the temperature again began to rise, and immediate operation was deemed imperative. The lateral sinus was exposed, and was found to be filled with a firm clot. This was removed by means of the curette until free hæmorrhage occurred from both the upper and lower ends of the incision in the sinus. The sinus was exposed, and incised from just above the jugular bulb to within about an inch and a half from the torcular Herophili. The entire wound was packed with iodoform gauze and the usual antiseptic dressing applied. There was no subsequent rise of temperature, and a perfect recovery followed.

Dr. R. C. MYLES said that during the last few years he had been studying this subject, and had operated between one and two hundred times on the cadaver. The points made regarding the method of making the incision and reaching the antrum were particularly valuable. He raised the question as to whether we should chisel at the upper level of

the osseous margin or at the centre. His plan was not to destroy the upper posterior part, but to expose the cells just posterior to the osseous canal, and extend the opening in a spiral manner upwards, inwards, and forwards through the antrum into the attic. The approach to the lateral sinus could usually be determined by the great hardness of the bone and the bluish colour of the part.

Dr. W. B. JOHNSON said that there were times when it was very difficult to secure absolute asepsis. He had been greatly interested in the case of leptomeningitis which had recovered after operation, yet he felt that it would be extremely rare for recovery to follow in cases in which meningitis or cerebral abscess existed prior to the operation.

Dr. R. FROTHINGHAM (New York) remarked that some very good operators still used the drill, and that it could hardly be classed as a "relic of barbarism." Neither did he think that, even if all aseptic precautions are carried out, surgeons can feel safe if they accidentally expose or enter the lateral sinus or cerebral cavity, as when they confine their operations to the mastoid cells.

Dr. DENCH, in closing the discussion, said that some operators used the burr, but that this was employed for a very different purpose from that for which the drill was used by the earlier operators. The object in the old "drill operation" was to simply enter the antrum through the cortex, no attempt being made to remove the carious bone.

Dr. ARTHUR G. ROOT (Albany) presented a *Case of Bilateral Hæmorrhage from the Labyrinth through the External Auditory Canal due to Cranial Fracture.*

On November 4, 1895, the patient was working on a scaffold about fourteen feet from the ground. This suddenly gave way, and he fell on his forehead. When found he was not unconscious, but was unable to rise. He was bleeding from a contused wound on the right side of his forehead, and no fracture was found. Soon after arriving at hospital he became unconscious, vomited, and soon sero-bloody fluid escaped from the ear and from the nose. He says when he fell his hearing left him. Remained in bed for about fourteen days; was semi-unconscious for about forty-eight hours. He complained of severe headache for first week. This headache was principally located in the occipital region and back of neck; it then became spasmodic. He complained of cold feet most of the time. Every time he rose in bed he became dizzy. After second week he sat up some, but was not able to get about much. He slept continually, breathing stertorously. Toward the last he would awaken, and complained of troubled dreams he had while asleep. At present he has buzzing in the ears, like waves of water and like steam. When these noises stop he hears vibrations as of a train of cars. The principal features of interest are that the loss of hearing is absolute upon both sides; further, there seems to have been at no time any involvement of either facial nerve.

Diagnosis: Fracture at base, with hæmorrhage into the labyrinth upon both sides.

Robert E. Myles.

ANNOTATIONS.

ON GARGLING ACCORDING TO THE METHOD OF VON TROLTSCH.

By PROF. GUYE (Amsterdam).

IN the March number of this journal I see in the proceedings of the British Laryngological, Rhinological, and Otological Association a suggestion by Lennox Browne *to abolish gargling in the treatment of diseases of the throat*. Now, I am not of Mr. Browne's opinion as to the uselessness of gargles, but I do not think a discussion on gargling in general would promise to be very fruitful, as positive proof in therapeutical questions is very difficult to obtain. But Browne mentions in his paper the method of Von Trölsch, and the directions which he gives for it differ importantly from those given by Von Trölsch himself. I consider we owe it to the memory of Von Trölsch to state this difference.

Von Trölsch prescribed the following method :—" Sit, or rather lie " down, with the head thrown back : take a mouthful of the gargle, and " make the movements of swallowing without letting the liquid go down " the throat."

Mr. Browne says :—" Take a mouthful . . . ; then, *closing the nose with the finger and thumb to prevent entrance of air, open the mouth and make the movements of swallowing,*" etc.

The direction to close the nose was never given by Von Trölsch. I looked up the subject in the sixth German edition, Leipzig, 1877, p. 372; but I do not know if the mistake has been made in an English translation, in which case the Italian proverb, *tra luttore, traditore*, would find its application. If not, of course the unwilling "traditore" is Lennox Browne.

Making the movements of swallowing whilst closing the nose with the finger and thumb is to perform Toynbee's experiment—a method by which air is pumped out of the middle ear, as is very easily demonstrated by inserting a small manometer into the meatus.

This method is very injurious to the ear, and it explains the fact that some patients with impaired permeability of the nose are more deaf after each meal. I once had a patient who, from this cause, could hear hardly at all whilst eating; and being in the habit of dining daily with a few fellow-students, and finding that he could not enjoy their society while eating, he finally resolved to dine beforehand, and then to sit and enjoy the conversation of his friends during their dinner.

I quote this case simply as an example of the injurious effect of swallowing with the nose closed, and if this was Von Trölsch's method of gargling it should be condemned. But it is not so, and I for my part would make the suggestion "not to abolish gargling," but to use it as an adjunct to other local treatment; to reserve, perhaps, Von Trölsch's method for chronic cases; and, lastly—a point in which I fully agree with

Browne—to use only harmless ingredients. (To my own satisfaction, and mostly to that of my patients, I generally prescribe a solution of about half per cent. of chloride of ammonia, with about one per cent. of salt.)

It is rather remarkable that, according to Von Tröltsch, Celsus already recommended gargles in ear disease, although it is not known that he knew anything of the Eustachian tube.

LATENT EMPYEMA OF THE MASTOID ANTRUM.

Dr. PAUL RAUGE, in an article on "Otitis and Mastoiditis" ("Bulletin Médicale," June 24th, 1896), draws an interesting analogy between suppurations of the mastoid antrum and those in the antrum of Highmore. Just as of late rhinologists have learnt to recognize latent empyema of the latter cavity, so, says Dr. Paul Raugé, aurists now see in many cases of prolonged intractable suppuration of the middle ear a latent empyema of the mastoid antrum. In the typical cases there are "no phenomena of retention, pain, no swelling, no fistula, no abscess of the soft parts—nothing but a simple discharge, which is so much the more insignificant that it reaches the orifice of the meatus mixed with the discharge from the tympanum, and that it is very difficult to recognize how much in the total of the otorrhœa is due to the tympanic cavity and how much to the mastoid." He attaches little or no value to the lamentable attempts which have been made within the last few years with the laudable intention of arriving at the detection of pus in the mastoid cavities: percussion (Koerner, Moos, Eulenstein); transillumination (Caldwell, Urbantschitsch) by means of an electric lamp introduced into the meatus or applied on the posterior surface of the mastoid; exploratory puncture (Ferrerri); lastly, auscultation of the mastoid by means of an otoscopic tube applied to different points on its surface while a tuning-fork vibrates on the vertex (Okunnef.). He holds "that the existence of this suppuration can in reality only be determined by a somewhat uncertain collection of probable signs: increase of discharge, slight painful tension, some general symptoms. These are the least vague of the indications which lead to a suspicion of a latent mastoiditis." He concludes that "whenever an otorrhœa persists and proves intractable to simple treatment, one may almost certainly affirm that the mastoid is affected. Operators know it well, and they are so certain that by perforating the mastoid they will find what they are looking for, that they no longer make a useless *détour*" (Schwartz, Luc, Zaufal). Instead of entering through the meatus and timidly following the course that the pus has taken, they attack the antrum straight away, ready to return on their steps and to carry their operative procedure as far as the tympanum, when the extent of the lesions—as is most ordinarily the case—requires a complete operation."

The dangers of analogy are well known, and it would be, in our opinion, somewhat risky to be led by this specimen of that figure of speech—to apply, in consequence, identical principles of treatment to the case of the mastoid antrum when it must be admitted the circumstances are

considerably different, and the risks attending the operation so very much greater. At the present time the indications for opening the mastoid antrum on account of chronic otorrhœa, as such, can certainly not be said to be complete, but Dr. Raugé's analogy is in many respects a happy one, and in time we believe its correctness will force itself more and more on the minds of otologists. It cannot, however, be accepted as a practical guide until it has been tested by actual clinical results—not simply by *a priori* conviction.

Dundas Grant.

ABSTRACTS.

DIPHTHERIA, &C.

Bazin, A. T.—*Diphtheria: Notes on Treatment by Antitoxin.* "Montreal Med. Journ.," Apr., 1896.

THIS paper, which deals with a series of 103 cases treated with antitoxin, ten of which ended fatally, contains several points of much practical interest. The author considers that it is better to give an over than an under dose, inasmuch as any toxin remaining unneutralized by the first injection speedily increases to the amount originally present. With regard to the local lesion, it is usual to have the throat perfectly clean in four days, and the author lays stress on the importance of using sprays of bland solutions as soon as the membrane has ceased to be thick and dirty; more powerful applications, such as peroxide of hydrogen, having a tendency to cause persistence of membrane.

Whereas in diphtheria not treated with antitoxin the percentage of albuminuria is from 50 to 70 per cent., only 36 of the series of 103 exhibited this complication, and in only five of these was any increase of albumen noticed after injection. In only two cases did pains in the joints occur with the erythematous or urticarial rashes. Of 50 cases traced, twelve suffered from paralysis. In the case of a nurse full doses of antitoxin were administered twenty-four and thirty-eight hours respectively after the onset of faucial symptoms, with rapid recovery. On the seventeenth day paralysis of the palate and neuritic pains in the limbs supervened and persisted for a month.

Ernest Waggett.

Nyulasy, Frank A.—*Diphtheria in an Infant eleven months old; Tracheotomy; Antitoxin; Recovery.* "Australasian Med. Gaz.," March 20, 1896.

IN this infant tracheotomy for diphtheria was successfully performed at probably an earlier age than in any previous case in the colony.

Antitoxin was injected on the second day after the larynx had become involved. The same night the condition was such as to demand tracheotomy. After the membrane had been removed from the trachea the breathing was easy. The following morning there was a little dyspnoea and an absence of secretion. In consequence of the ominous character of the latter feature a full dose of Behring's No. 2 serum was injected. Tracheal secretion became free the next morning, and a piece of membrane an inch long was coughed up, giving great relief. A full dose of No. 1 serum was now injected, after which the child gradually improved and is now quite well. The tube was removed on the fifth day after operation. The author attributes the ultimate cure of the diphtheria to the use of antitoxin, for in his experience a "dry tracheotomy" was formerly always fatal. *A. B. Kelly.*

Sorensen (Copenhagen).—*Antitoxin Treatment in Diphtheria*. "Hospitals-Tidende," 1896, No. 4.

THE author, who is physician to the Copenhagen Fever Hospital ("Blegdams Hospital"), publishes in this article statistics of three hundred and eighty-five children with diphtheria without stenosis of the larynx, and eighty-seven children with croup, treated in the above-mentioned hospital with or without Behring's antitoxin, from October, 1894, to the 1st of May, 1895. Excluding moribund patients and infants with pneumonia, sixty-three children of the first group of three hundred and eighty-five children were treated with serum. All these cases were more or less severe. The mortality of these cases was thirty-three per cent., which was also the exact mortality of the severer cases treated without serum. The author's conclusions are as follows:—The cases treated with serum did not show any improvement over the cases treated without serum, either as to the course of the disease or to its duration. Hæmorrhagic diathesis and diseases of the kidneys seemed rather to appear more frequently in the cases treated with serum, and exanthemata, accompanied by fever, were observed now and then in this group of cases. Serum was tried in eighteen cases of croup, and did not seem to have influence on the course of the disease, and all the severe cases of croup ended fatally, while the favourable results could be attributed to the benign character of the epidemic.

Holger Mygind.

Diphtheria and Coryza.—"New York Med. Times" May, 1896.

RECENT experiences in the treatment of diphtheria have shown that coryza in a child is a very fertile field for the propagation of the Klebs-Loeffler bacillus; the City Board of Health of Brooklyn require all school children having coryza to be examined. Cultures are made from the secretions by the city bacteriologist.

A. B. Kelly.

NOSE, &C.

Joal.—*Laryngeal Congestions of Nasal Origin*. "Rev. de Laryng.," April 11, 1896.

THE author refers to a previous paper of his, published in 1884, on "Laryngeal Fluxions," in which he had neglected to give importance to the nasal factor. He discusses laryngeal congestions proceeding from one or other of the following causes: 1, more or less complete obstruction of the nose; 2, propagation of vasomotor disturbances of nasal origin; 3, reflex action consecutive to the erection of the cavernous tissue; 4, lowering of the respiratory capacity by nasal influence; 5, functional insufficiency of the nasal resonator. He relates in detail five cases of vasomotor congestion of the larynx of nasal reflex origin, the laryngeal symptoms, hoarseness, cough, swelling of mucosa, occurring after the nasal phenomena, sneezing, secretion, pituitary turgescence, etc.; and he succeeded in all cases in provoking the laryngeal phenomena by stimulation of the trigeminal and olfactory nerve endings. The author has demonstrated the lowering of the pulmonary capacity by affections of the nose, e.g., in a young singer a hypertrophic rhinitis diminished the capacity by seven hundred centimetres, and loss of high notes followed, difficulty of *mezzo ai voce*, hoarseness, etc., all of which were cured on the removal of a nasal spur. These accidents occur through excessive work on the part of the larynx, leading to fatigue; eventually laryngeal lesions are manifested, congestion, increased susceptibility, cough, chronic laryngitis, with

thickenings, nodules, etc. The lowering of the resonating power of the nasopharynx always plays an important part in causing fatigue of the larynx, as Michel pointed out in 1876. Joal cites two cases of adenoids causing laryngeal symptoms and loss of voice, cured by their removal.

R. Norris Wolfenden.

Poulssohn, E.—*A Case of Hydrorrhœa Nasalis.* "Med. Soc. Christiania Reports," 1895.

A MAN, aged thirty, otherwise healthy, commenced in his thirteenth year to suffer three and four times yearly from attacks of excessive nasal secretion, lasting three and four days. The attacks by degrees became more and more frequent, the secretion more abundant and watery, while the duration of each attack was shorter. The attacks now generally appear every second week, and last one or two days; they commence generally in the morning with a sensation of irritation in the nose and pressure over the forehead, and when the patient gets out of bed the secretion becomes so abundant that it is impossible for the patient to do anything but to sit quietly and let the fluid flow into a basin; when obliged to move about he must hold a pocket-handkerchief constantly to his nose. This flow continues until about two o'clock at night, when he generally falls asleep, the discharge then leaving off until the next morning, when he wakes up to suffer again like the previous day, until it suddenly stops during the afternoon. The quantity of fluid discharged during an attack is estimated to be about one litre. The examination of the fluid gave the following result: Watery, white opalescent fluid of slight alkalic reaction; specific gravity, 1.006—1.007; 0.02 per cent. of albumen, 0.93 per cent. of salts, principally chloride of soda and iron, and small quantities of a fatty substance; microscopically white corpuscles. The examination of the nasal cavities did not reveal any abnormality. The patient had tried various treatments without any result. The speaker had prescribed atropin in a one-tenth per cent. solution, and the patient had derived great benefit from this drug, ten drops of the solution often being able to check the attacks or to lessen their intensity; and although this medicine had been taken for a considerable period of time, no ill effects had been observed. Dr. Poulssohn considered the affection to be of a purely nervous character, but would refrain from giving any opinion as to whether it must be considered an affection of the fifth nerve or of the sympathetic.

Dr. UCHERMANN had had the patient under his treatment, and found a slight hypertrophy of the anterior end of the right concha media and of the anterior part of the septum on both sides, and had treated these slight anomalies locally without any effect whatever.

Dr. O. BULL mentioned a case observed by him, in which abundant secretion from the nose had appeared in attacks together with an eruption of herpes cornea, and pointed out the possibility of the naso-cilio nerve being affected in this case.

Prof. DAAR considered Dr. Poulssohn's case to be due to a lesion of the fifth nerve, especially of the sphenopalatine branch, as it was a fact that the serous secretion of the pituitaria membrane was under the influence of this nerve.

Holger Mygind.

Woods, R. H.—*Modification of the Indian Rhinoplastic Operation.* "Brit. Med. Journ." April 18, 1896.

At a meeting of the Royal Academy of Medicine in Ireland the author described his modification of the operation, by means of which the whole of the new nose was lined with a skin surface. The forehead wound, instead of being sutured, was covered by a skin flap from the arm—a procedure which did away with the necessity for economy in the cutting of the forehead flap, and made the complete lining of the nose with skin a possibility.

Ernest Waggett.

LARYNX, &c.

Egidi.—*Laryngeal Stenoses and their Treatment.* “Rev. de Laryng.,” Feb. 22, 1896.

A PAPER read at the second meeting of the Italian Society of Laryngology. The author divides laryngeal stenoses into (1) chronic, (2) acute, (3) of external origin. After reviewing the various causes which give rise to stenosis, the author proceeds to review the treatment. For certain affections general treatment is indicated. In syphilis, especially with collateral cedema, it would be a grave error to submit the patient to surgical operation without previous general treatment; he injects fifteen centigrammes of calomel and gives corrosive sublimate sprays, delaying operation as long as possible. He has seen severe stenoses disappear. In chronic stenoses Schroetter's tubes have lost their value since the practice of intubation, especially with Massei's modified tubes. In cicatricial stenosis they are most valuable after previous dilatation. If this form of stenosis resists dilatation and intubation, it is better to proceed at once to thyrotomy and excision of the cicatricial tissue. In stenoses due to tumours (not malignant), when these are removed by instruments sudden death may occur from asphyxia, so that it is necessary to be in readiness for immediate tracheotomy should danger arise; it is better than intubation. He relates such a case from his experience. He cites Massei's opinion that in children especially tracheotomy should precede attempts to remove laryngeal growths. He disapproves of the prolonged wearing of the canula for several months in the hope of spontaneous resolution, without an attempt being made by laryngotomy to clear the larynx. In tubercular stenoses Egidi cannot advise intubation, as recommended by Massei, Dillon-Brown, and others. He prefers tracheotomy, and his experience has been that the rest thus given to the larynx causes disappearance of infiltration, and even of tubercular vegetations, and it is especially beneficial in primary forms. If instrumental interference is necessary later on, this is more effective after tracheotomy. He refers to three cases of Massei's in which laryngeal tuberculosis was completely cured by tracheotomy, and he is only a very guarded advocate of curetting, etc.

In stenoses from abductor paralysis tracheotomy must be preferred to intubation. In acute stenoses treatment is identical in all forms except croup. In those due to cedema, phlegmonous laryngitis, erysipelas, laryngeal abscess, perichondritis, etc., which perhaps last only a few days, and the danger is only a question of a few hours, intubation is the treatment to be preferred. In croup, while serum treatment softens the membranes and assists their expulsion, intubation prevents the asphyxia and is preferable to tracheotomy in most cases. *R. Norris Wolfenden.*

Lack, H. L.—*A Contribution to the Operative Treatment of Malignant Disease of the Larynx, with Special Reference to the Danger of Cancerous Wound Infection.* “Lancet,” June 13, 1896.

THE object of this paper is, first, to direct special attention to the possibility of the dissemination of cancer by means of direct transplantation, as distinguished from dissemination by means of the blood and lymph channels; secondly, to the danger of infecting a wound with cancerous material in operations for malignant disease generally; and, thirdly, to consider the importance of these facts in relation to local recurrence after operations for malignant disease of the larynx. Thirty-five cases are quoted in support of this thesis, of which four occurred in the practice of the author in the last four years. The conclusion is that it seems very advisable

that in all cases of malignant disease the growth should be removed in one piece, all incisions being made in healthy surrounding tissues, and, where this has not or cannot be done, that the wound should be cleansed afterwards by cauterization.

St Clair Thomson.

Marsh, F.—*Cicatricial Stenosis of Larynx.* "Brit. Med. Journ.," April 25, 1896.

At a meeting of the Midland Medical Society the author showed a female patient of five years who had been unable to dispense with a tracheotomy tube inserted some months previously. Under an anæsthetic cicatricial stenosis of the larynx was detected. The cicatrix was divided with Heryng's knife, an O'Dwyer tube inserted, and the tracheotomy tube removed. Nine days later the O'Dwyer tube was found still to be indispensable, and on account of an attack of typhoid was allowed to remain *in situ* for three months. On removal both respiration and phonation were easily performed.

Ernest Waggett.

Otto, C. (Copenhagen).—*Remarks on Erysipelas of the Larynx.* "Bibliothek for Læger," April 1, 1896.

A HEALTHY man, aged thirty-seven, had for three weeks had a slight cold in the head and a cough. Three days before he was admitted to the hospital he had become hoarse, with some difficulty in breathing, these symptoms by degrees increasing in intensity, and the last four hours there had been repeated attacks of dyspnoea. On admission to the hospital the temperature was 100·6°, and there was cyanosis of the face, stridulous respiration, recession of the jugular and the lower parts of the chest-wall, and general collapse. The urine contained a large quantity of albumen. The pharynx presented a normal appearance, while laryngoscopy revealed the existence of a considerable œdema of the mucous membrane of the epiglottis and the ary-epiglottic folds. Tracheotomy was now performed under slight chloroform-narcosis and the respiration became free. Thirty-six hours later the temperature, which had not since risen above 101·9°, rose to 103·5°, and the patient began to collapse without any considerable dyspnoea; clonic spasms of the lower extremity began to appear, the collapse increased rapidly, and death occurred. At the *post-mortem* examination the ary-epiglottic folds were found considerably œdematously swollen, injected, and ecchymotic, the swelling extending to the pyriform sinus and the posterior wall of the pharynx, and upwards to the anterior face of the epiglottis; and the base of the tongue, while the trachea was only injected. The peritracheal muscles were infiltrated with a greyish fluid, and small abscesses filled with yellow pus were scattered about. Similar abscesses were to be found in the submucosa of the sinus pyriformis. Besides, the *post-mortem* examination revealed the existence of an endocarditis and of parenchymatous degeneration of the myocardium, the liver, and the kidneys. The pus from the small abscesses of the larynx contained numerous masses of staphylococci, and no streptococci were to be found. Although there was no history of infection from erysipelas, the author thinks himself justified in considering the case described above as one of erysipelas laryngis, laying stress upon the result of the laryngoscopy, the remittent course of the disease, and the result of the *post-mortem* examination.

Holger Mygind.

Peck, G. A.—*Gangrene of the Ear and Face complicating Pertussis.* "Arch. Pediat.," April, 1896.

THE patient, aged twelve months, developed severe pertussis in November, 1894, which became complicated with a thin, blood-tinged discharge from the left ear. On January 9th, 1895, signs of inflammation about the left ear became manifest,

cedematous swelling of the canal obstructing the exit of an offensive watery discharge. On January 11th the swelling anterior to the meatus was punctured. On the 13th sloughing was noticeable about the wound, while the membrana tympani was seen to be intact. From this date sloughing rapidly progressed, and at the time of death (on January 23th) a circular patch of gangrene, five inches in diameter, occupied the left parotid region.

Ernest Waggett.

Ward, E.—*Laryngectomy*. "Brit. Med. Journ.," May 16.

THE author described the operation of laryngectomy, by means of which the organ was removed from below upwards without preliminary tracheotomy, and the opening into the pharynx subsequently sutured. The tracheal orifice was stitched to the skin flaps, suitably pared, and no tube was necessary. No communication remained between the air and food passages. He had operated on a man of sixty-four with epithelioma, a man of forty-two with dyspnœa and dysphagia, and a child with laryngeal papillomata. The author claimed that the operation as thus performed would reduce the mortality, shorten convalescence, add to the comfort of the patient, and would justify attempts at radical cure in some cases which were at present considered inadmissible.

Ernest Waggett.

E A R.

Clark, Gaylord P.—*The Equilibrium Function of the Ear*. Trans. Medical Society of the State of New York, 1896.

MUCH evidence has been accumulated from experimental operations upon animals and pathological conditions in man that the ear is concerned in the maintenance of body equilibrium. Although operations and pathological conditions alike have injured the structure of the ear, sometimes extensively and even diffusely, yet the results observed indicate a specialization of function in the different parts of this complex organ. Lee, of Columbia, has recently carried on a series of experiments upon the ear of the dogfish, and his results are of special value in that they define the nature of this specialization. His method has enabled him to throw certain parts of the ear—for example, different semicircular canals—into or out of function without coincident injury to their structure. He has observed that rotation of the body of an uninjured fish is accompanied by certain movements of the eyes and fins, which are characteristic of the direction in which the fish is turned. The eye movements are those which tend to retain the visual impressions of the resting position. The fin movements are those which tend to resist the turning. He has exposed and stimulated by pressure the uninjured ampullæ of the different semicircular canals, and called out eye and fin movements similar to those accompanying rotation of the uninjured fish, and which are just as characteristic of the ampulla stimulated as in turning they are of the direction of the turning. He has divided the ampullar nerves just before their entrance into the ampullæ and thrown the semicircular canals out of function: then the above-mentioned effects of physiological and artificial stimulation could no longer be obtained. His experiments show that each semicircular canal functions not only in movements in its own plane, but also in planes at angles with it, but less so as the angle increases up to a right angle. He has found that the anterior and posterior vertical semicircular canals of one ear function together in lateral rotation in planes between them and towards that side; and that the same is true of the two anterior vertical semi-

circular canals, one in each ear, in forward rotation, or of the two posterior vertical semicircular canals in backward rotation. The evidence seems to be perfectly conclusive that the semicircular canals of both ears of the dogfish constitute a compound sense organ, which is stimulated by head and body movements of rotation, and which functions by its parts, or by combinations of its parts, in every plane in which turning may occur.

The semicircular canals of the human ear are similar in structure and arrangement to those of the dogfish. Careful study of cases of aural vertigo, in the light of such definite physiological knowledge of the relation of the ear to equilibrium phenomena in certain animals as we now have, is to be desired.

Much clinical evidence has been recorded that vertigo may be produced by stimulation of the inner ear, and that certain characteristic movements have been obtained by stimulation of certain parts of the inner ear. In many cases, however, the mere fact of vertigo has alone been noted without observation as to its nature. If the pathological picture in aural vertigo is to be compared with the physiological picture in experiment on animals, certain conditions which may modify the former should be taken into consideration. The effects of disease may be much less definitely localized than those of operation. The sensations of dizziness are to be distinguished from the reflex movements due to disturbance of the co-ordinating mechanism. Clinically the subjective sensations predominate. In experiment on animals the objective reflex movements can alone be studied. When sensations and reflex movements of vertigo are both present in clinical cases the sensation appears to be that of rotation towards the affected side; the reflex movements are in the opposite direction. Birds and fish, upon which so much operative work has been done, when suspended—as they so much of the time are—in a gaseous or liquid medium lack all surface-contact impressions, and then manifest greater disturbance of equilibrium from ear lesions than they do when such impressions are supplied.

Lesions of the human ear may be accompanied by less pronounced disturbance of equilibrium on account of the surface-contact impressions which under all ordinary circumstances constantly arise. The study of a large variety of forms among the lower animals shows that the otolithic structures as well as the semicircular canals are concerned in the equilibrium function. *Gaylord P. Clark.*

Compaired.—*Two Cases of Acute Infantile Labyrinthitis.* “*Rev. de Laryng.*,” May 16, 1896.

OWING to the sudden development of symptoms this condition is often mistaken for acute meningitis, typhoid fever, acute hydrocephalus, etc. It is seen much more frequently in children than adults. It is not rare after parotiditis. Large doses of quinine and salicylates given for a long time have caused many deafnesses in children and adults, mistaken for labyrinthitis. It is often the result of propagation of a cerebro-spinal meningitis. In typhoid, when deafness is present it occurs late, in labyrinthitis it occurs very early; vertigo is absent in typhoid but present in labyrinthitis. The diagnosis from meningitis is more difficult. There are no paralytic symptoms in labyrinthitis, and the latter is readily curable, whereas the former is rapidly fatal. Labyrinthitis supervening at the period of development of speech, if the deafness is not discovered in time, leads to deaf-mutism.

R. Norris Wolfenden.

Marsh, F.—*Cholesteatoma of Mastoid.* “*Brit. Med. Journ.*,” Apr. 25, 1896.

At a meeting of the Midland Medical Society the author showed a man of twenty who had suffered with mastoid abscesses, accompanied with but slight pain. On exploring a discharging sinus situated above the external auditory meatus, a cavity

fully two inches in diameter was found, containing fetid putty-like *débris*. The walls were of bone, except posteriorly, where the cerebellum could be felt pulsating. No meningeal or cerebral complications had occurred.

Ernest Waggett.

Moire, E. J., and Bordier.—*An Electro-Telephonic Acoumeter.* "Revue Inter. d'Electro.," Feb. and Mar., 1896, p. 253.

THIS apparatus is composed of (1) a Leclanché pile, (2) a milliampèremeter and rheostat, (3) an interrupter for breaking or making the current from the pile, (4) a telephone receiver. The following is the principle of this new acoumeter: the sound which is to be employed in testing the hearing maintains a constant height and timbre; the intensity alone varies, and this is measured by the electrical intensity expressed in the milliampères.

When the acoumeter is used the patient is placed at a distance of two mètres from the apparatus; the rheostat being at the maximum resistance, the telephonic clicking is not perceived even by the normal ear. As the handle of the rheostat is turned, however, the sound, increasing in intensity, comes to be heard; the indication of the milliampèremeter is then noted. If, in spite of the removal of the entire resistance the patient does not hear the clicking, he is brought nearer the receiver until the sound is perceived; besides the number of milliampères, the distance of the patient from the apparatus is then noted.

Examinations carried out in this way will allow of comparisons being made between all cases, and at different dates in the same case.

A. B. Kelly.

Poulsen, Kr. (Copenhagen).—*A Case of Purulent Sinus Thrombosis after Chronic Otitis Media.* "Hospitals-Tidende," 1895, No. 38.

A BOY, aged fifteen, had from his earliest childhood suffered from left otorrhœa. In January, 1895, pains in the left ear appeared, and on the 15th of February resection of the left mastoid process was performed; the temperature did not, however, fall, and rigors occurred. Two days later swelling and tenderness were noted along the left internal jugular vein. The pulse was 120, the sensory system was not involved, and the fundus of the eye was normal. On the 19th of February the temperature was normal in the morning, and 40·5° C. (104·8° F.) at noon, and the general condition became worse. The left transverse sinus was then laid open and found to be surrounded by pus; the vein was opened, a large puriform thrombus removed, and the wound was dressed without ligature of the internal jugular vein. Until the 9th of March the patient had constant high fever, alternating with normal temperature, and several minor metastases appeared; these were caused by retention of pus in the wound by the firm pressure of the iodoform gauze, necessitated on account of recurring hæmorrhage from the sinus as soon as the plug was removed or was left loose in the wound. The patient, however, ultimately recovered, the external wound healed, but the discharge from the ear still continued.

Holger Mygind.

Poulsen, Kr. (Copenhagen).—*Otitic Temporal Abscess; Resection of the Cranium; Recovery.* "Hospitals-Tidende," 1896, No. 10.

DR. POULSEN reports the following case:—The patient, a man, aged fifty-two, had for many years had a discharge from the right ear. In August, 1895, intense pains in the right side of the head, and tenderness behind the external ear. A fortnight previous to the operation a slight paresis of the right facial nerve appeared—which paresis, by the first examination of the patient, proved to be of peripheral origin—the pains became severer, accompanied by giddiness, and in the morning of the day of the operation the patient vomited. No rigors or other fever symptoms.

On the 13th of September, 1895, Dr. Poulsen made an incision over the mastoid process. After the opening of a small sub-periosteal abscess, admittance to the antrum was tried by means of a chisel. There was, however, no antrum to be found in the normal place, the bone being sclerotic, but the superior cells of the process were found to contain pus. At last two tablespoonfuls of pus without any odour were seen to stream from the middle cranial cavity, proceeding from a cavity between the tegmen tympani and the dura mater. A piece of bone the size of a shilling was now removed from the cranium, and iodoform gauze was introduced. The first days after the operation the general condition of the patient improved and the pains disappeared, the temperature being subnormal. Later on, however, the state of the patient presented the following principal features:—Temperature always subnormal: pulse, 76 and 48; pains in the head; now and then a single vomit, but frequently a feeling of sickness; drowsiness often present, but now and then it disappeared entirely. On the 5th of October swelling of the right optic was diagnosed, and a fortnight later also on the left side, with hæmorrhage in the retina. On the 20th of October the wound is reopened; the dura mater opened through an incision, and the brain seen tense and without pulsation. Piercing the brain substance with a stiletto gave no result, but a knife introduced in different directions at last released five tablespoonfuls of odourless pus when the knife was introduced two centimètres upwards and backwards in the temporal lobe, and pulsation of the brain reappeared. A drainage tube was introduced into the cerebral cavity. The following days the general conditions were very much improved; but three days later the temperature began to rise, drowsiness and vomiting reappeared, and the flow of pus through the tube ceased. The tube was removed and found blocked by cerebral tissue, and it was reintroduced, with the aid of an anæsthetic, and two teaspoonfuls of pus escaped. The same process was repeated three days later on account of the occlusion of the tube with a coagulum, but this time a considerable venous bleeding necessitated the introduction of iodoform gauze into the abscess cavity. After this the healing of the wound, however, proceeds normally. On the 7th of November the left papilla is normal and the right one improving very much, and on the 1st of December the patient leaves his bed. On the 11th of January, 1896, the right papilla is normal, and the patient leaves the hospital with a trivial discharge from the ear, the paresis of the left facial nerve having disappeared entirely. On the 4th of February the patient is reported to be perfectly well.

Holger Mygind.

Rueda.—*Necrosis of the Labyrinth.* “*Rev. de Laryng.*,” March 15, 1896.

A CHILD, three and a half years of age, after measles had suppurative median otitis of the right side. Four months afterwards there was right facial paralysis and abundant sanguinolent suppuration from the meatus, a narrowed ulcerated meatus, red and bleeding fungous growths, which were removed, and an osseous mass at the bottom, which was removed by forceps. The child was for a month without treatment, returning then with great pain and hæmorrhage, due to the same condition. A sequestrum so large that it had to be broken was this time removed. This was the inferior part of the vestibule, the posterior half of the external semicircular canal, the inferior orifice of the posterior semicircular canal, and the commencement of the first turn of the cochlea, the promontory, fenestra rotunda, and inferior edge of the fenestra ovalis being clearly distinguished. After removal of this sequestrum cure was rapid, and cicatricial tissue was formed at the bottom of the meatus. The course of these symptoms occupied a year, without being accompanied with the least sign of meningitic or cerebral symptoms. Only sixty-eight cases of necrosis of the labyrinth have been recorded.

Some weeks after the appearance of facial paralysis, and before discovering any sequestrum, the child was observed to fall towards the right side when walking. This lasted fifteen days, unaccompanied with any meningo-encephalic symptom. The author believes this to be a clinical demonstration of the function of the semicircular canals, and makes the opinion of Baginsky doubtful (basing it upon the negative clinical signs in a case of complete destruction of the labyrinth) that affections of equilibrium are due to a meningo-encephalic lesion. The author believes that sight, touch, or the muscular sense in his case have disappeared entirely, either spontaneously or by the action of the semicircular canal of the opposite side. The functional substitution of a semicircular canal would be analogous to what occurs in certain localized lesions of the nervous centres. As in Goldstein's case (*JOURNAL OF LARYNGOLOGY*, 1893), a certain degree of audition was preserved in this child. He repeated words and numbers spoken at a distance of four mètres on the affected side.

R. Norris Wolfenden.

REVIEWS.

Pritchard.—*Diseases of the Ear*. Third Edition. Lewis' Practical Series. 275 pages, price 6s.

It is rarely that one feels so thoroughly pleased and satisfied with a book as one does with the one in question. This book professes to be practical, and it is thoroughly so: the illustrations are not too numerous, but they are useful in most instances, though there are one or two which would be better in the instrument catalogue. Of the others, most noteworthy is the particularly clever diagrammatic sketch of the auditory apparatus as given on page 6. The first seven-and-twenty pages are devoted to the anatomy of the organ, which is dealt with in an extremely able way—short but clear, a style which characterises the book throughout, and adds much to its value. The author devotes about thirty pages to methods of examination, and whilst speaking of the sounds heard by the diagnostic tube, says (page 42) that besides the sound of inflation, of perforation, or of fluid in the tympanum, though there are others they are of not much moment. The author describes the method of Valsalva, and we gather that he still employs it, although its use is a moot point with aurists. In measurement of the hearing power the directions are very clear and most practical. In speaking of the precautions to be taken by artillerymen and others, we are told to direct that the tympanic cavities be well inflated; this is, however, hardly necessary, as keeping the mouth open is quite sufficient. Like most English aurists, Dr. Pritchard does not countenance removal of the stapes: nor, when speaking of the removal of adenoid vegetations, does he advise any nasal injection for at least two days after the operation page 137. Further on (page 142) Dr. Pritchard throws the great weight of his valuable experience into the balance against so-called turbinotomy.

There are also numerous useful hints, not only in the recognition of disease, but also in avoiding errors in diagnosis, such as the origin and appearance of false membrana tympani page 69, etc.

We have nothing in particular to say about the chapter on naso-pharyngeal and nasal conditions found in and leading to ear disease, except that they are fully equal to the rest of the book.

And, finally, Dr. Pritchard gives a series of useful formulæ and preparations for the treatment of both ear and naso-pharyngeal affections, which will continue to prove a boon to many.

NEW PREPARATIONS.

ANTISYPHILITIC SERUM. ANTITYPHOID SERUM. (Messrs. Burroughs, Wellcome & Co., Snow Hill Buildings, London.)

We have received from the above firm the antitoxins of syphilis and typhoid; they are to be obtained either in the fluid form or in the dry scales, similar in appearance to the dry antidiphtheritic serum prepared by the same firm some year or more ago, which enhances the keeping power of the agent and minimizes its bulk. That these serums will gradually come into use is most probable, and it speaks highly for the enterprise of this firm that they keep more than pace with the demands of the profession—they are ahead, in fact.

FET. BOVINE PURIF. (TABLOIDS). (Burroughs, Wellcome & Co., Snow Hill Buildings, London.)

These tabloids are coated with keratin to pass through the stomach unchanged. They contain a pure oxbile, free from all impurities both mechanical and chemical, and are of great value in all those conditions in which the supply of bile has fallen, whether from structure changes in the liver itself or from obstructive trouble in the ducts.

CHLORALAMIDE AND BROMIDE OF POTASSIUM TABLOIDS. (Burroughs, Wellcome & Co.)

A tabloid contains five grains of each drug, and by this combination it is said that a hypnotic effect can be obtained in acute mania and other forms of insanity: also this combination is reputed to be of great value in sea-sickness, and we suggest that those of our readers who require another remedy for this trouble try this drug—or, rather, combination.

"APENTA" WATER. (The Apollinaris Co., 4, Stratford Place, Oxford Street, London.)

We have given this water an extensive trial, and have every reason to be pleased and satisfied with the result. It is by no means disagreeable to the taste, which can scarcely be said of some waters. The active salts appear to be the sulphates of magnesia and soda, both of which are salts which are of great value in reducing gouty thickenings of the pharyngeal mucosa, and is the more useful in as much as its chemical composition is constant. Like most bitter water, it should be mixed with an equal bulk of very hot water.

THE
JOURNAL OF LARYNGOLOGY,
RHINOLOGY, AND OTOTOLOGY.

Original Articles are accepted by the Editors of this Journal on the condition that they have not previously been published elsewhere.

Twenty-five reprints are allowed each author. If more are required it is requested that this be stated when the article is first forwarded to this Journal. Such extra reprints will be charged to the author.

The Editors are not responsible for opinions expressed in original Articles or Abstracts in this Journal.

Editorial Communications are to be addressed to "Editors of JOURNAL OF LARYNGOLOGY, care of Rebman Publishing Company, Limited, 11, Adam Street, Strand, London, W. C."

**THE RELATION OF ACUTE DISEASES OF THE NOSE
AND THROAT TO DISORDERS OF DIGESTION.¹**

By MOREAU R. BROWN, M.D. (Chicago).

CLINICAL experience demonstrates that there are certain well-defined relations existing between acute inflammatory conditions of the nose and throat, and other disordered organs of the body. In some cases these relations are easily explained, while in others they are shrouded in mysteries, which pathology has as yet failed to unfold, and which all attempts to account for can be at present but matters of theory, not based on the result of completed scientific investigation. Not that the pathologist or laryngologist has been derelict in searching for the etiological relations, but rather that the limits of science have precluded their discovery. The connection between acute inflammation of the upper air passages and disorders of digestion, although a matter of clinical observation, is no exception to this statement, and the surprising fact is that there is such a scant amount of literature bearing on the subject.

Bosworth in his work on "Diseases of the Nose and Throat" briefly refers to the changes occurring in the pharyngeal mucous membrane in stomachic disorders, and, further, calls attention to chronic inflammation of the upper air passages as being an important etiological factor in acute inflammation of the same region. He considers the involvement of the pharynx in gastric disorders as due to the fact that the pharynx is a part of the digestive tract, being the point where the air passages cross it, which may in some cases account for the extension of the inflammatory process.

In his Lettsonian Lectures, T. Lander Brunton refers to stomach cough

¹ Read at the Eighteenth Annual Meeting of the American Laryngological Association, held in Pittsburgh, May 16th, 1895, opening the discussion on the Relation of Diseases of the Nose and Throat to Disorders of Digestion.

as being due to mild inflammatory changes in the upper air passages, plus the digestive disturbances. He cites a case of stomach cough wherein the pharynx was decidedly hyperemic, and, although no laryngeal examination was made, it was concluded from the symptoms that the larynx was similarly involved. The cough and inflammation failed to respond to treatment until a blue pill had been administered. The following somewhat similar case in my own practice serves to illustrate the condition rather more forcibly :—

Mr. —, age about forty-five, restaurant keeper by occupation, a healthy, robust-looking man, fond of rich food, consulted me first about five years ago for a rather severe attack of acute inflammation in the upper air passages (nose, pharynx, and larynx), accompanied with asthma. As a history, he stated that such attacks were generally preceded by gastro-intestinal disorders, and a few days prior to the present attack he had suffered considerable digestive disturbance, such as loss of appetite, disgust of food, nausea, headache, abdominal distress and pain, eructation of gas, constipation, and mental depression. The treatment directed to the inflammation of the upper air passages was carefully carried out for a short time, but failed to give relief until a saline laxative, followed by such treatment as was calculated to restore the digestion, was ordered and taken. Afterwards appropriate treatment, carried on for some time, checked further asthmatic attacks : but I have seen him a few times since with acute inflammation of the upper air passages, which responds readily to remedies directed to the digestive organs.

I have searched the medical literature within my reach for other authorities bearing on this subject, and I am able to give the following reports :—

(Edema of the larynx in the angio-neurotic, connected with gastric disturbances generally, is mentioned in Collins, Osler, Lovett, and also by Pryor ("Med. Record," July 28th, 1894).

Nogano ("Courrier Méd." Paris, Sept. 23rd, 1893) records a case of hæmorrhage of the larynx in a forty-five-year-old man who had suffered from cirrhosis of the liver and cardiac disease.

Cackle ("London Med. Times," Aug. 4th, 1884) records a case with symptoms resembling those of laryngeal phthisis. Later two attacks of unconsciousness followed in quick succession, the latter being fatal. At the autopsy, latent hepatic abscess was found : also a small ulcer of the left vocal cord, the nature of which was not stated. No signs of tuberculosis were discovered.

Ed. Löri ("Die durch anderweitige Erkrankungen bedingten Veränderungen des Rachens, des Kehlkopfs, und der Lufttröhre," Stuttgart, 1885) considers "gastro-intestinal catarrh may be either the cause or the result of chronic throat and laryngeal catarrhs." He mentions, also, hæmorrhagic affections of the larynx in liver cirrhosis and ecchinococcus.

Ed. Löri ("Jahrbuch für Kinderheilkunde," XXI., 1884 ; "Centralblatt für Laryngologie," I., 300 ; "Orvosi Hetilap," 1884, No. 12 ; "Pest Med. Presse," No. 31), speaking of gastric complications of laryngeal disease in children, says :—"Laryngeal disease may affect the "stomach by continuity, by swallowing secretions of ulcerated sores,

"cankers, etc., and gastric disturbances are often produced in a reflex way from the larynx. Especially do we frequently observe meteorism and anorexia, with inflammatory disease of the posterior laryngeal walls, and also gastric dilatation and vomiting."

Turck has also recently demonstrated the origin of stomachic disorders from naso-pharyngeal infection, finding similar micro-organisms in both regions, and the former relieved after relieving the latter. Further bacteriological research may be able to demonstrate the reverse of this position, and establish that stomach disorders are casual factors of laryngeal inflammations, though, as far as I can learn, no one has undertaken the task.

Steffin ("Ziemssen's Cyclopædia") states that spasm of the glottis may be favoured by elevation of the diaphragm owing to over-filling of the stomach, or by over-distension of the intestines by faecal masses, or by serous swelling of the liver. Amongst the conditions found present in spasm of the glottis are swelling, and yellow or yellow-grey colour of the liver, and a considerable deposit of fat within its cells.

Ariza (Madrid), in an article entitled "Laryngismo Gastrico" ("Centralblatt," II., 446; "El Distancen," No. 44, p. 211, 20th of May, 1885), cites a case (Virchow's "Annalen") of aphonia from indigestion relieved by an emetic. He distinguishes three varieties of laryngeal disturbance from gastric disorders:—(1) Laryngeal hyperæsthesia, with normal aspect of fauces and larynx, the patients complaining of burning sensations, pain, etc. All these patients suffer from dyspepsia. He reported cases at the Laryngological Congress at Milan. (2) "Laryngismo gastrico plastico." The vocal cords and surroundings are hyperæmic and painful, and vary with the gastric disorder. This form especially occurs with chronic gastric disease. (3) "Laryngismo gastrico paralytico." He says that he cannot explain the aphonia and dysphonia in cholera cases, except by a temporary reflex paralysis of the larynx. He finds, however, in the literature, no laryngoscopic observations, and thinks they would be difficult to make. Kispert, who abstracts his paper, says that Matterstock made some good observations of this kind in the Würzburg epidemic, and found this paralysis frequent, especially on the left side.

So much for authorities. The explanation of the conditions of these similar occurrences is not easy, but the following may be suggested:—In œdema of the larynx, occurring during the course of liver disorders, it is apparent that we must look to the obstruction of the aortal circulation as a cause, and in the inflammation produced by the imbibition of alcohol rather to the venous stasis which follows its use. This is particularly the case in the œdema of the upper air passages ensuing upon a debauch, as is shown by the rapidity with which it disappears on taking further liquor early the next day, and the subsequent increase of the œdematous condition, or by the more rapid recovery following an evacuation of the gastrointestinal tract.

In acute catarrhal inflammation of the nose and throat, supervening on disorders of digestion, we have an entirely different element to deal with. In offering an explanation for this condition we must largely theorize. It has been, in times past, the custom to call to our aid the old

theory of reflexes, and it may not be unreasonable to suppose that these views are not entirely without foundation. It is a recognized fact, as so aptly put by M. Gross ("New York Med. Journ.," May 4th, 1895), that "every affection of the stomach is reflected back on the other organs, and, inversely, every disorder of the organs reacts upon the stomach." Yet in the present day of bacteriological research, when the micro-organism theory of inflammation is generally recognized, we must agree with Bosworth, who, in a paper read before this Association last year, states: "I think that, as we become more familiar with the disorders of the upper air tract, we will in many cases be able to abandon this somewhat indefinite and obscure term 'reflex,' and adopt the theory that many of the so-called 'reflexes' are the direct result of morbid action upon either the nerve centres or the tissues involved in the inflammatory process" (p. 655, "New York Med. Journ.," Nov., 1895).

What bacteriological research has failed to fully establish is demonstrated clinically, namely, that an acute inflammation of the upper air passages will create disorders of digestion by direct infection through the mass of muco-purulent secretion, loaded with bacteria, which finds its way into the stomach. But as to the reverse process, is it probable that the upper air passages become inoculated directly by the stomach contents? The irritation of the larynx and pharynx, or, less often, the naso-pharynx, from the eructation of the contents of the stomach, is to be ascribed more to the direct irritant effect of the secretion than to inoculation. Yet the irritating effect may be so intense and prolonged that acute inflammation follows. In this case it may be that the secretion furnishes a proper soil for the bacteria which light up the inflammation.

J. E. Free ("New York Med. Journ.," Dec. 7th, 1895) states:—"If there is a morbid process at work in the stomach, there will be established in it colonies of bacteria in abundance: the toxins may be absorbed, and nourishment to the tissues thus contaminated, and every tissue of the body compelled to feed on this contaminated blood."

Warren, in his "Surgical Pathology" (p. 122), says:—"Van Buren explains catching cold 'by arrest of function of the skin as an emunctory, whereby certain effects and presumably noxious materials which should be eliminated are retained and act as blood poisons.' This view of auto-infection is used to explain many febrile and inflammatory disturbances due to ptomaine absorptions arising from gastric and intestinal disorders."

We know that the presence in the circulatory blood of certain toxic products of some micro-organisms favours the development of foci of inflammation, and the site of a chronic inflammation seems sufficient to predispose to infection. Orloff ("Materialien zur Frage über die Eintrittswege der Mikroben in den Thierischen Organismus"—"Centralblatt für Bacteriologie und Parasitenkunde," Band 111, No. 15) fed with pure culture of staphylococcus six healthy animals. He then made a subcutaneous fracture in all six animals, and found that suppuration ensued at the point of fracture. This demonstrates that bacteria and toxins in the stomach will infect any weak point in the system. We may, therefore, surmise that in this manner the nose and throat may be infected through

disorders of digestion. Another explanation of this condition might be that digestive disorders would lower the vitality to such a degree that the patient would become more liable than the healthy to attacks of acute inflammation, and this would be more apt to occur at points weakened by chronic inflammatory changes, such as we find in the upper air passages of the majority of individuals.

There is one disease of the gastro-intestinal tract in which laryngeal complications have been extensively studied; and whilst typhoid fever may not be considered as falling within the scope of my subject, yet the inference is legitimate that, if typhoid fever does produce laryngeal complications, so also may gastritis have an analogous influence on the larynx and other upper air organs.

Laryngeal complications occurring in typhoid fever have attracted no little attention, and literature abounds with reports of cases and theories advanced as to the relation they have to each other. The laryngeal changes vary from a slight degree of hyperæmia to rather extensive loss of tissue. In some cases there is what appears to be a simple catarrhal laryngitis, or there may be œdema, infiltration of tissue, ulceration, or perichondritis. The larynx is, at times, left in a state of extensive deformity. The changes may occur at almost any stage of the typhoid period, occasionally ushering in the disease. Voltini (*Archives of Laryngology*, Vol. I.) describes a case where a patient, after exposure to wet and cold, developed a severe laryngitis. In the course of a few days regular typhoid fever set in, and, running its usual course, the laryngeal condition progressed rapidly to the stage of ulceration.

The laryngeal complications seem to bear no relation to the typhoid symptoms. The deeper tissues are seldom involved in the early stages of the disease; ulceration, œdema, and perichondritis occur in the later stages, or during convalescence, sometimes as late as two months after the onset of the disease (*Union Med.*, March 10th, 1892). As may be surmised, the symptoms may be serious from stenosis, or from the dangers of necrosis. The condition in some cases may result in loss of life; tracheotomy or intubation may be required; and the resulting deformities may necessitate the indefinite retention of the tube. The lesions generally involve the epiglottis, arytenoids, and cricoid cartilages.

Lucatela (*Gazetta degli Ospedali*, 70, 132, and others report finding Ebert's bacilli in the larynx in fatal cases. Brieger and Fränkel failed to demonstrate the presence of typhoid bacilli in these laryngeal ulcers (Kanthack and Drysdale, *JOURN. OF LARYNGOLOGY*, April, 1896), but the weight of evidence seems to favour the specific origin of laryngeal ulcers in typhoid. Taken alone, the argument from analogy is not convincing; but it seems to be plausible enough to infer that if the typhoid bacilli can infect the larynx, so may other forms of bacilli which have their origin in the stomach be able to invade and infect, likewise, the upper air passages.

To resume, then, the subject, I would say that no proof has yet been presented of direct causation of acute inflammatory processes in the upper air passages by stomach disorders; but that clinical observation is abundant in favour of such causation, and that the hope may be entertained that the bacteriologists may soon be able to supply direct proof.

ANÆSTHETICS AS EMPLOYED FOR OPERATIONS ON THE THROAT AND NOSE.

By W. G. HOLLOWAY, M.D., B.A., Cantab.,

Assistant Surgeon to the Central London Throat, Nose, and Ear Hospital.

("Medical Magazine," June, 1896.) (*Abstract.*)

OPERATIONS requiring anæsthesia were divided into three classes : (1) Those which only require a period of anæsthesia not exceeding 45 to 50 seconds ; (2) Those which require anæsthesia up to one, one and a half, or two minutes at most ; (3) major operations, for which deep and prolonged anæsthesia has to be maintained. The anæsthetic invariably employed for operations in the first of these divisions is nitrous oxide gas, which is supplemented by the administration of a small quantity of ether vapour for those in the second class.

For the major operations, with but very few exceptions, chloroform is always given in preference to ether, which produces venous congestion in the cervical vessels, irritation in cases of asthma and chronic bronchitis, hyperæmia of the kidneys, nausea, and not uncommonly pneumonia. Struggling, excitement, and even maniacal symptoms sometimes occur during its administration, especially where the patient is addicted to alcohol.

The administration of nitrous oxide gas has been adopted as the anæsthetic for operations of short duration, not only on account of preventing pain and suffering on the part of the patient, but also for the equally important purpose of obviating the shock and terror experienced especially by children, in course of the operation. The routine method of administering gas, either alone or supplemented by a small quantity of ether vapour, is described in detail, and the author deprecates the practice of allowing the gas to rush into the reservoir or bag, because it is then inspired under pressure, and more is driven into the lungs than can be properly absorbed by the blood in any given time. The signs and effects of nitrous oxide narcosis are described in detail, and special stress is laid on the fact that the cough reflex remains ; a circumstance which in the author's opinion is of the greatest importance in operations on the pharynx and tonsils. For the presence of this reflex, by inducing cough, prevents the entrance of blood into the larynx, trachea, and bronchi.

The objections which have been frequently made to the use of nitrous oxide gas for tonsillotomy, removal of adenoids, etc., from the point of view that its effects are so transient and the period of anæsthesia is so short that the operator cannot finish the operation satisfactorily before the patient recovers consciousness, are discussed : and (to confute this opinion) very strong evidence in favour of its efficiency is produced by the author, who appends a table of over 4500 cases (extending over a period of four years), in all of which either gas alone or gas supplemented

We learn that Dr. JOHN NOLAN MACKENZIE has been appointed Clinical Professor of Laryngology at the John Hopkins University, Baltimore, U.S.A.

with a small quantity of ether vapour, was given satisfactorily and without untoward results.

Should the operator prefer to perform tonsillotomy as a preliminary to removal of adenoid growths from the naso-pharynx—thus dividing the operation into two parts—gas may be administered a second time without danger, and provided that proper care is exercised no bad after-effects are to be apprehended. Should hæmorrhage to any alarming extent occur during the operation—an exceedingly rare consequence—it is far less serious under the short narcosis of gas than it would be under the more deep and prolonged anæsthesia of either chloroform or ether. In the experience of the author, nitrous oxide gas has little or no influence on the amount of hæmorrhage consequent on these operations, but it certainly has no tendency to increase it.

The next point to which attention is directed is the *position of the patient during operations* for which either gas alone, or combined with a small quantity of ether, is employed. At the Central London Throat, Nose, and Ear Hospital the patient is seated in a chair provided with a high back, fixed to the floor and facing the operator. In the case of small children, the child is held by a nurse seated in the chair, while a second nurse standing behind holds the head and pushes up the tonsils, or this duty may be performed by the anæsthetist. Previous to the administration of the gas, a mouth prop is inserted to keep the patient's mouth open ready for the operator. The gag used at the hospital in question is the instrument introduced by Wyatt Wingrave. A caution against forcibly opening the mouth by a side-gag is added by the author, who records two cases in which dislocation of the lower jaw was produced by a too energetic application of that instrument.

The advantages assigned to the sitting or upright position of the patient during these operations are :—

1. That the surgeon is placed in the best situation for reflecting light from his frontal mirror into the mouth, and is enabled to observe and control every step in the operation without change of position, either on the part of the patient or himself.

2. This position is a perfectly safe one for the patient, provided that gas, or gas supplemented by ether in small quantity, is employed as the anæsthetic.

3. If severe hæmorrhage should occur, the surgeon is in the best position to determine its source, and apply the proper measures for its arrest.

4. The operator has complete control over the patient ; for by bending the head forward the blood easily runs out of the mouth, instead of collecting at the back of the pharynx, in which case it must inevitably find its way into the larynx and bronchi.

5. The celerity of operation, comfort to the patient, convenience to the anæsthetist, and cleanliness, as regards soiling the patient's and assistant's clothing, are other advantages confirmed by practical experience.

The recumbent position is considered to be dangerous, from the increased difficulty in operating safely and satisfactorily on the part of

the surgeon, combined with the risk to the patient of blood gaining entrance to the larynx and trachea.

Anæsthesia by Chloroform for operations on the throat and nose is briefly considered, with special reference to tonsillotomy and removal of adenoid growths from the naso-pharynx. It is generally admitted that in these operations deep chloroform narcosis should not be induced, and special caution is advised with regard to the abolition of the cough reflex. It is, however, very easy to lay down rules for the production of a certain degree of anæsthesia in theory, but extremely difficult to carry them out in practice, for it is doubtful if any anæsthetist, however experienced and skilful, can administer chloroform with such absolute accuracy as to retain the cough reflex to the exclusion of others.

It is therefore contended that chloroform is a dangerous anæsthetic for operations on the throat and nose; and in support of this statement the author appends a table recording fifteen deaths from chloroform reported in the medical press since 1892 (purposely omitting many others not officially notified in the medical journals, which, if added, would increase the mortality from this anæsthetic to a somewhat alarming total).

Attention was especially called to a column in the above-mentioned table in which *the quantity of chloroform* administered in these fatal cases was recorded. This was compared with another table, giving statistics of the last twelve cases in which chloroform had been administered by the author. The enormous difference in the amount used is very remarkable. For instance, a case of aural polypus which ended fatally required four drachms of chloroform for a comparatively short operation; while in the author's table a goitre was removed—a procedure occupying seventy-four minutes—with the expenditure of a less amount of the anæsthetic.

The author concludes by a description of "KROHNE'S IMPROVED REGULATING INHALER," which is invariably used by him, and has proved most satisfactory in practice on account of the small quantity of chloroform required to produce anæsthesia, the facility with which the narcosis can be maintained, and the safety against the administration of an overdose which this apparatus confers.

The enormous saving in the amount of chloroform used in this form of inhaler is very striking. For, as death under this anæsthetic is generally admitted to be due to an overdose, it must be evident that the quantity administered should be the least possible which is capable of inducing and maintaining the required degree of narcosis. Nevertheless, death may result from a small dose of chloroform if given in too concentrated a form; so that the fact of only a very small quantity having been given in a particular case by no means proves that the fatal result was not due to an overdose. Moreover, the unpleasant after-effects produced are regulated by the quantity of the anæsthetic inhaled, so that vomiting, nausea, headache, etc., are of rare occurrence in cases where only small quantities of chloroform have been given.

The so-called "open method" of giving chloroform, on a towel, must be absolutely deprecated, on account of the impossibility of estimating

the strength of the vapour inhaled at any given moment, and the great liability with such a method to administer a fatal dose.

The *average amount* of chloroform used for every *five minutes* during which anæsthesia was maintained in these twelve cases was 18·5 minims, a result which is curiously approximate to that obtained by Vincent, of Lyons, and Carter, from statistics of a much larger number of administrations; indeed, there is only a difference of ·5 minims. This, in the author's opinion, is convincing testimony of the accuracy of the regulating inhaler.

SOCIETIES' MEETINGS.

NEW YORK ACADEMY OF MEDICINE.

Wednesday, April 22nd, 1896.

Section on Laryngology and Rhinology.

Chairman—JAMES E. NEWCOMB, M.D.

Presentation of Cases.

Dr. THOMAS J. HARRIS presented three cases. He said two of the cases were rare, and one, though common, was interesting from the treatment and the method employed. The first, a young woman, had noticed for the past two months a growth in the left side of the nose, a little hæmorrhage, and had suffered from headache, nausea, and vomiting. The growth was pedunculated, attached to the septum, semi-solid, and not sensitive to touch. The second case was a man who had a tumour located on or near the vocal cords. The third case was one of tubercular laryngitis and pulmonary tuberculosis. The case had been under the care of a number of physicians, had consolidation at both apices, a temperature when first under observation of $101\frac{1}{2}^{\circ}$, and was unable to speak above a whisper. For three months he had been put on creosote internally, and intratracheal medication, with wonderful results. He was now able to work right along, temperature was normal, and the process in the lungs was checked. The ulcers in the trachea were entirely healed, appetite was good, he slept well, and was in a condition in which he could possibly be cured if he could be sent to the country.

In discussing the case with the tumour in the nostril, Dr. WRIGHT said he thought there was no doubt that the tumour was an angioma, which was the most common of any of the benign tumours of the septum.

The German writers recognized bleeding tumours of the nose, reporting twenty or more cases. Only nine or ten cases of true papillomata were recorded; nearly all were attached to the septum or to the floor of the nose.

Dr. MYLES wished to ask Dr. Harris if the man with the tumour in the larynx could phonate better now than he could before, for he thought the tumour was now too large to drop down between the cords.

Dr. HARRIS said the tumour did drop back between the cords, but the man phonated better when it was above.

Ulceration of Larynx.

Dr. WENDELL C. PHILLIPS presented a man, aged twenty-six, veterinary doctor, who, thirteen years ago, had an ulceration affecting the skin and free border of the cartilaginous septum. The scar tissue gave every indication that the disease had been lupus. An operation was performed, with recovery, as far as the man knew. Three years ago he began to have hoarseness, with gradual loss of voice from that time on. There was now scar tissue in the middle line of the nose. The voice had been lost for over a year. There was a pultaceous mass in the region of the turbinated bone and located on the left side. It bled easily, was covered with secretion, and there was also partial stenosis from the right side, perhaps due to deformity of the septum. In the larynx there was a large ulceration on the right side above the vocal cords, with a great deal of infiltration upon both sides. There was no history of syphilis, but he could not free his mind of the suspicion, and put the patient on potassium iodide. The patient was now taking 120 gr. per day, and also had had frequent applications of twenty-five per cent. ichthyol to the larynx. There had been much improvement. He was somewhat puzzled as to whether lupus and syphilis co-existed in this case.

Dr. WRIGHT thought there was no doubt it was specific, but it was strange that it had not attacked the bone.

Dr. MAYER said there was a great deal of thickening in the region of the arachnoid, so that it was difficult to get a good view. He thought it was specific in origin, and the induration would likely be resorbed if mercurial inunctions were added to the potassium iodide treatment.

Dr. MYLES thought there were important points wanting in any diagnosis. He thought the extensive infiltration in the larynx was partly due to the patient attempting to use his voice.

The Chairman, Dr. NEWCOMB, said the case was one of interest, and he recalled a case which came to the Demilt for treatment, and had been diagnosed and treated in several institutions as a case of lupus. It was put on specific treatment and improved at once. The physician became used to the rapid progress of syphilitic lesions, and sometimes might be misled by those cases in which the disease runs a slow course.

Dr. PHILLIPS said, though he thought the case was doubtless syphilitic, yet many of the symptoms were not those of tertiary syphilitic development.

New Remedies in the Treatment of Diseases of the Upper Air Passages.

Dr. CARL E. MUNGER read a paper on this subject. He said that during the past year a number of so-called new remedies had been used in the Manhattan Eye and Ear Hospital in the treatment of nasal and laryngeal diseases, and this report was based on the record of clinical cases at Dr. Chappell's clinic during the past year. Some of the drugs

were but old ones dressed in new clothes ; some had proven useful, and some had not.

Argentamin.—This was of much value in the treatment of catarrhal and purulent rhinitis, a five to ten per cent. solution being applied to the well-cleansed mucous membrane by the physician not oftener than every second day. A half to two per cent. solution might be given the patient for daily use at home. The older silver salts seemed better in chronic laryngitis.

Acetanilid was used for insufflation on nasal wounds after operations. The pure powder proved a better dressing than when mixed with zinc stearate. The healing seemed more rapid, frontal headache and neuralgic pains following operations seemed less frequent ; and no cyanosis, profuse sweating, cardiac depression, or unfavourable systemic effects were observed. Persistent hæmorrhages were apt to follow the use of the drug upon septal wounds.

Tannigen was used in cases of hypertrophic rhinitis and chronic nasal pharyngitis. The physician can use an alcoholic solution of a drachm to the ounce, while for the patient's use it was given from ten gr. to one dr. to the ounce in a vehicle known at the hospital as "oleum hydro-carbon compound." This was proposed by Dr. W. F. Chappell, and is a mixture of unguentum zinci oxidi and benzoïnol, a few drops of oleum gaultheriæ and oleum sassafras. The pure drug proved to be too strong ; sometimes the solution was made weaker than the above, but it did not prove as satisfactory in its results as was hoped, and seemed to act as a stimulant rather than an astringent.

Formalin in half to two per cent. solution was an effective deodorizer and disinfectant, and especially useful in syphilitic ulcerations. Dr. Munger narrated the history of two cases to show its usefulness for this purpose.

Cresote carbonate gave good results in acute follicular tonsillitis, even without other local or constitutional treatment. It relieved the patient quite rapidly, and often cured the case in two or three days.

Pyrozone was used in a three and a twenty-five per cent. solution. The three per cent. solution was valuable as an antiseptic and hæmostatic after operations, as a deodorizer, and to soften crusts and scabs previous to removal. The twenty-five per cent. solution, called "caustic pyrozone," was used in follicular pharyngitis and tonsillitis with fair results. It seemed more useful in a few cases of pharyngitis lateralis and mycosis of the pharynx.

Lysol had not been much used. In half to two per cent. solution it seemed a good antiseptic spray in cases where it was the custom to use carbolic acid solutions. It frequently proved very irritating to the mucous membrane, and its use was discontinued.

Thiol had not proved useful as yet. Absence of staining properties and disagreeable odours made it more pleasant for intranasal use than ichthyol.

Ortho-mono-chlorphenol had been used extensively in atrophic and ulcerative rhinitis and eczema alæ nasi, and the secretion and crusts were lessened very promptly by its use, and excoriations healed kindly.

A twenty-five per cent. solution in glycerine was used, but this twenty-five per cent. solution should be used by the physician only, and made as frequently as necessity demands. The drug was useful in ulcerations on the septum or turbinated bones, and in atrophic rhinitis most brilliant results were obtained. It was also useful in chronic naso-pharyngitis where the post-nasal secretion was excessive. Thus far the use of the drug has been satisfactory and gratifying, but they had not yet used it in the larynx.

In discussing Dr. Munger's paper, Dr. T. P. BERENS said he had used ortho-chlorphenol since 1884. He called attention to its anæsthetic effect, and said it numbed the base of the tongue when applied for irritation. He had found it useful in ethmoidal disease, where frequent application of the pure drug upon a very small tampon to polypoid or beginning polypoid degeneration gave good results.

Dr. GLEITSMANN said he had been using mono-chlorphenol, and had not found any anæsthetic properties. He used it in a two and a half per cent. solution. He said he wished again to draw attention to the anæsthetic property of antipyrin. In acute tonsillitis he injected two to five drops of a fifty per cent. solution, with the desired effect.

Dr. NEWCOMB said that a five per cent. solution of guaiacol upon a pledget of cotton could be applied to the nose with complete anæsthesia, and could be used in the ear when performing paracentesis of the drum membrane.

Dr. SMITH said he thought all the coal-tar series had an anæsthetic effect.

Dr. MUNGER said he did not want them to think that they used ortho-chlorphenol in full strength, except in cases of ulcers, where it did good.

Primary and Secondary Pharyngeal Tuberculosis, from a Clinical Standpoint.

Dr. WALTER F. CHAPPELL read a paper with this title.

Opinion differed as to whether tuberculosis could be engrafted primarily upon a mucous membrane. Dr. Chappell gave the history of three cases of tubercular pharyngitis, two of which were secondary and one primary.

In the first case the tuberculosis of the lungs was in an advanced stage. On the tenth day after the apparent infection of the pharynx yellow spots appeared and went on to ulceration, the patient dying six weeks after the pharynx became affected. Dr. Chappell showed cuts illustrating the condition at different stages of the process.

The second case received various treatment without relief, and four weeks before death the pharynx became affected; first a thickening of the mucous membrane, formation of yellow spots, and then breaking down and the formation of ulcers.

Case III. was a woman, nineteen years of age, who in 1895 came under treatment for post-nasal discharge and swelling of pharyngeal tonsil. The adenoid tissue was removed, but she afterwards returned complaining of chills. New tissue, hard and resembling adenoids, was

recognized, and the lateral folds of the pharynx, especially on the right side, appeared as thickened ridges, and a few days after the throat was sore and glands enlarged.

There were no symptoms of pulmonary affection; the patient had always been well, but, some months before, she had attended a sister who had tuberculosis, and after her patient died she occupied the same room, and slept in the same bed the sister had used during her illness.

A specimen of the lymphoid tissue was sent to Dr. Wright, who found tubercles in great numbers, and the diagnosis was made of miliary tuberculosis.

In discussing Dr. Chappell's paper, Dr. GLEITSMANN said he had seen but one case of primary pharyngeal tuberculosis, but he thought that if a tubercular infection was found in the pharynx, and no lesion anywhere else, it was proper to call it a case of primary tuberculosis of the pharynx, from a clinical standpoint at least. He would like to call attention to the fact that in treating cases of tubercular laryngitis or pharyngitis, the physician might be led to think the ulcers had healed, on account of the appearance of a seeming cicatrix, while investigation would show it to be only an accumulation of secretion, with the active process beneath. He had also been struck with the fact that patients often had large ulcerations, yet complained of very little pain. He had a case in which three-fourths of the epiglottis was eaten away, yet the patient did not complain of pain. Eight years ago he had a case of primary pharyngeal tuberculosis, which was cured, and had remained well ever since.

Dr. WRIGHT presented a microscopical specimen from the tissue sent to him by Dr. Chappell. He said he was interested in the case, as it came in a line of research he was trying to carry out. It was a question whether the lymphoid tissue was infected previous to the removal of the adenoid, or whether it gained entrance through that channel; but the swelling that appeared a week after the operation would hardly be due to an infection at that time, yet might be only the inflammation from the operation, and the manifestations that came on four weeks later might be the first appearance of the tubercular process.

He had taken twelve tonsils from healthy children and put them into the abdomens of guinea-pigs, and none had developed tuberculosis. Five or six years ago Massci had written to him concerning finding tubercle bacilli in healthy noses and throats. Two or three years later Strauss, in Paris, had found tubercle bacilli in the noses and throats of many attendants in the hospital for phthisical patients. As it is pretty hard to find the bacilli, it is quite probable they existed in healthy noses and throats quite frequently. So far the evidence went to show that lymphoid or adenoid tissue could be the seat of infection as well as any other, but, considering the great number with pulmonary disease, it was a great wonder that more cases did not occur in the lymphoid tissues.

Dr. HANCE said he had never seen a case of primary pharyngeal tuberculosis. He had been making some further experiments upon the source of infection, and found that the dust removed from an area an inch and a half square on the surface of a room in which two brothers had died of tuberculosis gave tuberculosis to a guinea-pig in thirty days.

Dr. MAYER said he thought mucous membranes once diseased gave entrance to the tubercle bacilli and infection, and the case under consideration seemed to indicate this fact. Healthy mucous membrane repelled the bacillus, and thus gave us an idea how to prevent infection. He thought there were mild cases of lupus with subsequent tubercular infection.

Dr. SIMPSON said he was always impressed with the small number of cases of pharyngeal tuberculosis as compared with tuberculosis in other regions, and it seemed probable that it might be due to the fact that the pharynx was so often cleansed by gargles, cleansing the teeth, coughing, etc., and thus the bacilli became dislodged. The larynx could not be so thoroughly cleansed, and hence was more liable to become affected than the pharynx, and the liability was still greater with the lungs for the same reason.

Dr. HARRIS recalled a case of Dr. H. P. Douglas, in which the pharynx remained in a stationary condition for a time, and then the lungs became affected. In this case also the right side of the pharynx was affected.

Dr. NEWCOMB said he thought that the lesson could be drawn that it was not safe to operate unless the patient could be removed from the source of infection.

Dr. CHAPPELL said the condition at the start was just like an ordinary cold. A small portion of tissue was removed, its place was taken by a larger amount, and the process extended.

Dr. F. QUINLAN presented a *Pair of Adenoid Forceps* for cutting and scraping. They were in the shape of a cone, and had the advantage of occupying a small space in the rhino-pharynx.

Dr. W. F. CHAPPELL presented a *Base for the Application of Medicines to the Nasal Cavity and the Pharynx*. It was the oleostearate of zinc, and had the advantage of being a semi-fluid material not susceptible to the ordinary changes of temperature, could be applied alone or with various medications, and clung to the surface to which it was applied. It could also be used for intratracheal application.

Dr. GLITSMANN said he found the forceps presented by Dr. Quinlan very useful, as they occupied but little space, and allowed of the removal of larger growths than other forceps.

Dr. R. C. MYLES presented a *Case of a Woman upon whom he had Operated Ten Days Before, Opening the Frontal Sinus on the Left Side*. There was a peculiar narrowing at the lower portion of the sinus near the opening of the infundibulum, and the back wall projected forward. There was now a polypoid growth near the floor of the infundibulum, which was not there before.

Dr. J. W. GLITSMANN, in *presenting a Case*, said it was of interest, as there were but few cases in which it was possible to see the opening into the sphenoidal sinus. This case had come to him last week, complaining of nasal obstruction; the nose was filled with crusts, the removal of which revealed the sphenoidal sinus. The sinus was four inches from the side of the nose. Other than this the case was of but little interest.

Dr. WRIGHT said he and Dr. Gleitsmann had differed before as to

whether the ethmoidal sinus could be seen, and now he would have to say that he had a case in which he could see the sinus; the middle turbinated bones were greatly shrunken, and it was possible to see and probe the sphenoidal sinus.

Dr. R. C. MYLES said, as to measurements to the sphenoidal sinuses, he had found the average from two and a half to three and a quarter inches, as measured from the centre of the septum or from the middle of the alæ. He had found it four and a half inches to the back wall, but this was obtained by bending the end of the probe a little.

Dr. J. E. H. NICHOLS *presented Two Cases, the First an Epuloid Growth upon the Superior Maxilla.* The patient wore a plate, and it was possible that irritation from it caused the growth. There was no pain, but the tumour was growing rapidly.

The *Second Case* was a girl in whom there was no definite history of hereditary syphilis, and the condition simulated lupus. About five months ago there had been noticed a discharge from the nose. There were perforation of the soft palate, and ulceration with partial destruction of the cartilaginous and bony portions. He had not had an opportunity to put the patient on the iodide treatment.

Dr. CHAPPELL *presented a Second Case,* a man who had been before the section on a previous occasion for the purpose of diagnosis. Since that time he had had to have a tracheotomy performed, on account of a carcinoma of the larynx. He presented the case because he thought the section would be interested in it.

Dr. WRIGHT said the woman whom Dr. Chappell had presented had come to his clinic, at one time, in a very reduced condition. She had improved rapidly upon iodides, but developed nervous symptoms, and had been transferred to that department.

The Chairman (Dr. NEWCOMB) *presented a Woman* who was employed at the Roosevelt Hospital, in the laundry. Five years before, she had "blind boils," and had been troubled with her hair dropping out in the spring. Six months ago she had a sore throat, caught cold, got worse, began to cough, had some post-nasal dripping and nasal discharge. The sputum was free from bacilli. The uvula was long, and a portion had been excised, a part of which had been sent to Dr. Wright and part he examined himself. There were round-cell infiltration and thickening of blood-vessels, with some new connective tissue. The patient had been treated with lactic acid, but, after microscopical examination, had been given mercurial inunctions and small doses of iodide, the patient being intolerant of the latter. There was infiltration of the epiglottis, uvula, soft and hard palate, and though the amount of potassium iodide administered was small, yet the infiltration was much less.

Dr. SIMPSON said, in regard to Dr. Nichols's case, that in epulis the prognosis should be guarded, as it was likely to become malignant. He mentioned a case of a patient about forty years old, in whom a seemingly benign tumour had become malignant with fatal result.

Dr. BERENS said he had seen a case of necrosis similar to that presented by Dr. Chappell. He had discovered a chestnut worm in the tonsil.

Dr. QUINLAN asked why Dr. Wright had suspected that the case presented by the Chairman was a case of lupus.

Dr. WRIGHT said it looked like a case of lupus, but the microscopical examination had proved it to be specific. He thought that often cases of suspected lupus would be found to be specific when put upon the iodide treatment.

Dr. SIMPSON asked if the case Dr. Chappell presented with carcinoma had been examined microscopically. It had.

Dr. MYLES said the case presented by the Chairman looked like a case of syphilis.

Dr. NEWCOMB said that in cases of lupus, when they were put upon specific treatment they usually got worse and suffered more pain. This patient was hopeful, and always thought she was getting on well, and was pleased with what was being done for her.

Dr. BEAMAN DOUGLASS *presented a Case of Primary Carcinoma of the Inferior Turbinate Bone.* He said that the literature gave a number of cases, but not many were confirmed by microscopical examination. There were only two cases reported previous to this that were primary and intranasal in origin. The patient presented gave a negative history on the mother's side, but the father had had a foetid discharge from the nose, disease of the antrum, later the right eye involved, and frontal sinus disease. The patient was thirty-one years old; was always nervous; noticed nasal trouble five years ago; now there was a mucous discharge from the left side; some bleeding after picking; and a year ago had a severe hemorrhage. Some pain developed a year ago; the lachrymal duct was stopped; the skin was not discoloured; the patient was weak, but had not failed much. The right nostril was normal. There was an ulcer on the left side, which looked much like atrophic rhinitis when scab was removed. The pathologist had reported that it showed the characteristics of carcinoma.

Dr. HOLBROOK CURTIS *gave the History of a Young Woman Thirty Years Old, who had come under his care for So-called Rose Influenza.* She had been unable to pass a flower-stand without being prostrated; had been nearly all over the world in search of relief, without obtaining any. It had occurred to him that he might treat her by suggestion. He told her that if she desired he would give her hypodermic injections of the extracts of the pollen and leaves of different flowers. He had begun with the rose, the lily-of-the-valley, the violet, and others. In about three months she was able to stand the presence of roses. He had begun this treatment over a year ago, and at the present time she could sleep in a room containing any variety of flowers. He left it to the opinion of the members of the section whether the success was due to suggestion or to some virtue in the hypodermic injections. Dr. Curtis made these remarks preparatory to a possible communication regarding experiments on hay fever.

Some Remarks on Nasal Obstruction, with a Description of a Naso-manometer: Naso-Pharyngeal Auscultation.

Dr. JONATHAN WRIGHT read the paper upon these subjects, and said that the statements of the patient could not be relied upon for the

detection of nasal obstructions, for they were often misleading, the patient complaining of something else. In cases of obstruction due to new growths, the development was so slow that the patient had probably not experienced any inconvenience from it. As there were so many circumstances interfering with a correct diagnosis, it had occurred to him that a naso-manometer might be constructed, and he presented one that he had made and found of service. It consisted of a graduated U-shaped tube, partially filled with coloured liquid, to which was attached a rubber tube, and to this a small metal tube. The small metal tube was placed at the patient's nostril, and by comparing the varying height of fluctuation of the liquid when the patient inspired the patency of the two nasal canals could be compared. It was also possible to establish a relative standard for normal respiration, which would aid in detecting nasal obstruction. The naso-manometer could be hung on the wall, or attached to the stand on which other instruments were kept.

Dr. Wright called attention to the fact that the nasal alæ often formed an obstruction to respiration. This might be due to paresis of the nasal muscles of respiration; and he had been able to cure cases of this kind.

In children, adenoid growths were often the cause of nasal obstruction. The child, if it could make statements, could not aid in leading to a diagnosis; and in some cases there were very slight symptoms of obstruction. He thought that auscultation could be used with benefit in these cases. By placing the stethoscope on the back part of the cheek, it was possible to detect a change in the respiration in cases where there were adenoid growths.

Dr. Wright spoke of bony cysts in the nares, and said the idea had long existed that they were due to hypertrophy of bone, and folding over, as it were, of the outgrowth of bone. This did not seem to explain it, for there were very few glands in the cysts; it was hard to conceive of the outgrowth of bone connecting with the bone above to form the cyst, and then none had been seen in the process of development. He thought that the cysts were due to rarefying process in the bone itself. They occurred quite often in chronic cases, and nearly always were found in women.

Dr. GLEITSMANN said he had used the naso-manometer, and it had proved fairly successful, and he thought it would be especially useful in discovering obstruction in the posterior portion of the nares. Dr. Wright had also called his attention to naso-pharyngeal auscultation, but although he had not had much time to try it, he had been able to detect a varied sound in case of adenoid growths.

Dr. RICE said a number of years ago Dr. Andrew H. Smith showed him an instrument similar to the one presented by Dr. Wright, but he thought it had never been perfected. He was pleased with the happy way the writer had put the symptoms of nasal obstruction as stated by the patient. The point in regard to obstruction from the dropping down of the alæ was one that was not appreciated. The septum of the nose without deviation or ecchondroses might be so thick as to virtually cause nasal obstruction.

Dr. KNIGHT said, in reference to Dr. Wright's statement that no

intermediate condition had been seen in cysts that formed in accordance with Macdonald's theory, that when he wrote his article he had a case in which there was a tubular appearance of the bone, anterior and posterior openings being present, but he now thought it was a case in which the bony wall of the cyst had become disintegrated.

Dr. NEWCOMB said he had seen a case in which there was a curving inward of the middle turbinates, but he had not thought of it being an intermediate stage of cyst formation. He had used auscultation in diagnosing obstruction, and he had heard sounds he could not describe. He had not had enough experience to determine much from it yet.

Dr. A. RUPP said he recently treated a case of rheumatic unilateral facial paralysis in which the nasal muscles were implicated, and nasal respiration of the side affected impeded. As the paralysis was recovered from, the patient himself had noticed improved respiration through the nostril that had been faulty.

The Constitutional and Local Causes of Nasal Hæmorrhage, and the Methods of Controlling it.

Dr. CLARENCE C. RICE read the paper on this subject, and said dangerous cases of hæmorrhage were not common, but they came occasionally, and were hard to treat. The etiology might be classed as due to constitutional and local conditions and traumatism. He had found that the dangerous cases were those due to constitutional changes, change in blood-pressure, change in the blood-vessels, and change in the blood. There was often a local condition in the nose that added to the disposition to nasal hæmorrhage. Cases of hæmophilia he did not think were common. Often there were renal, cardiac, and other conditions present, that produced conditions favouring bleeding. Mental conditions also favoured bleeding. Nose bleeding was quite common in boys about the age of fourteen or fifteen.

It was rare to see nasal hæmorrhage where the mucous membrane was moist. It was only necessary to mention nasal hæmorrhage from trauma. There were some unusual cases due to varicose veins of the nose, and some due to over-exertion. All were familiar with the nasal hæmorrhages due to acute diseases, febrile conditions, etc.

In treating nasal hæmorrhage it was important to locate the bleeding point, and this was generally upon the septum or the floor of the nose. Sometimes the spot was high up and hard to see. He had seen only one case of bleeding from the turbinated side.

It was very important to treat the cause: if due to renal disease, treat it; if cardiac, treat that, etc. It was important to have a smooth nasal septum, and for this it was an excellent plan to use friction as described in a previous paper. Posterior nasal plugging might be of service in general practice, but in the hands of an expert it was not necessary.

With the aid of a speculum and a good light the bleeding point could be located, and compressed with antiseptic gauze cut in strips. If bleeding due to trauma and not secondary, douching with hot Seiler's solution was excellent. Cocaine would be an ideal remedy were it not

that it was followed by a determination of blood to the part. A tampon of cocaine was better than a spray. The galvanic cautery might be applied to the bleeding point. If there was much hæmorrhage, anterior plugging could be resorted to, and this could be most easily done with cocaine. It was well to begin plugging on the floor and build up and forward.

Dr. WRIGHT said he thought Dr. Chappell did not mention post-nasal adenoids in children as a cause of hæmorrhage.

Dr. MAYER said he thought that it would be frequently found that boys about fifteen that had nose-bleed were masturbators. Iodoform gauze was quite a favourite for plugging. He thought it better to introduce a small catheter, attach a string, pull it into the nares after attaching the gauze, and then pack. He had seen a case of severe hæmorrhage from both nostrils caused by a sarcomatous growth.

Dr. A. RUPP asked Dr. C. C. Rice whether his quotation from Bosworth's book coincided with the experience of all other specialists. His own experience contradicted the opinion that when constitutional diseases are present the nasal hæmorrhage is usually from both nostrils. When bleeding from the nose has continued for a time, the blood often regurgitates around through the other nasal passage, thus giving the appearance of bleeding from both sides of the nose.

Dr. COFFIN said he thought in a case of hæmorrhage sufficiently severe to demand a posterior plug that we had but little time for cocaine, and, in fact, that the cocaine would be so much diluted by the blood as to be of little use.

He reported two cases in which severe secondary hæmorrhage had followed the application of the galvano-cautery to the posterior end of an inferior turbinated bone.

He said he had found the best plug to be a conically shaped cotton plug, made by taking sufficient absorbent cotton, tying string about its middle, and then doubling the cotton upon itself and the string, and taking two or three half-hitches about the free ends of the cotton. The small end to be drawn into nose.

The best styptic he had found to be a sat. sol. of the aceto-tartarate of alum.

Dr. GLEITSMANN said he had used punk to stop nasal hæmorrhage, and found it quite useful. It absorbed moisture, and in twenty-four hours could be easily removed.

Dr. QUINLAN said he found chromic acid excellent. It could be fused on a probe, and applied to the bleeding part. He could not value it too highly. It had advantages over all other agents that he knew.

Dr. PHILLIPS said he thought the writer had omitted to mention internal treatment in these cases, such as ergot, ergotine, etc.

Dr. RICE said he simply quoted Dr. Bosworth on hæmorrhage from both sides of the nose in constitutional diseases. Most of his cases were unilateral. He had mentioned internal medication.

T. P. Berens.

SOCIÉTÉ FRANÇAISE d'OTOLOGIE et de LARYNGOLOGIE.

(Continued from page 30.)

(From "La Semaine Médicale.") Reported by Dr. JOAL.

M. GELLÉ (Paris). *The Treatment of Labyrinthine Vertigo.*

After a few historical remarks, M. Gellé briefly described the anatomical and functional conditions, which make of the labyrinth an active centre of reflex excitations or inhibitions, which are made manifest by labyrinthine vertigo.

Motor, psychical, and sensory disturbances, and disturbances of general sensation, are reactions from the labyrinth. The patient retains consciousness ; often he is warned by an aura of the approach of an attack.

After showing that the majority of the lesions of the ear end in compression of the inner ear, Dr. Gellé analyzed the pathogenesis of vertigo *ab aure lesa*, and on this basis founded his indications for treatment, medical and surgical, of auricular vertigo. The treatment includes practically the whole of otiatry : inflation and aspiration of air, rupture of adhesions, passive movement of the apparatus of transmission, dilatation of the tubes, section of cicatrices and of tendons of muscles, extraction of the ossicles, of the incus, mobilization of the stapes, etc., etc.--in short, all operations tending to remove pressure from the labyrinth.

The author next reviewed intralabyrinthine affections. The treatment for hæmorrhage is leeches to the mastoid process, cupping of the back of the neck ; purgatives, milk diet ; paracentesis of the membrane if there is any hyperæmia of the tympanum, or any previous lesion of the ear ; sulphate of quinine in large doses at first ; colchicine, etc., for gouty patients ; hypodermic injections of ergotine, etc.

The first symptom of albuminuria is frequently vertigo with labyrinthine apoplexy ; if there is arterio-sclerosis or a cardiac affection with increased blood tension, milk diet and laxatives are indicated.

Vertigo often occurs along with congestions of the ear or head, with acute or subacute affections of the lungs, etc., and indicates a sudden or a permanent increase of the intralabyrinthine tension.

Intracranial tumours, compression of lymphatic vessels, obstruction of the return circulation, cold, heatstroke, sunstroke, all induce labyrinthine irritation and its consequences. Treatment is as above. Hot baths and exciting thermal waters are to be avoided. In chronic cases the circulation is to be regulated (milk, strophanthus, etc.), and arsenic and iodides are useful. In patients suffering from neurasthenia or arterio-sclerosis, cold douches and bromides are to be prescribed. The slightest affection of the ear increases the predisposition to the effects of the above-mentioned causes, and must therefore be treated.

Anæmia, from whatever cause, induces hyperæsthesia of the labyrinth and reflex hyperexcitability, the two principal causes of vertiginous affections. Tonics, a suitable diet, and country air rapidly improve the condition. Cardiac and renal affections and arterio-sclerosis must be

treated; if strength allows of it, most reliance should be placed on quinine sulphate.

Inflammation of the internal ear produces reflex vertigo and delirium, difficult to differentiate from a meningitis or a very acute otitis media. Pilocarpine, strychnine, quinine used as near the onset as possible, generally stop the vertigo; electricity and massage have also been used. If one believes in a condition analogous to glaucoma (auricular glaucoma), is not the indication to trephine the labyrinth or remove the stapes?

If syphilis, hereditary or acquired, attacks the labyrinth, the deafness and vertigo can be cured by specific treatment, specially by subcutaneous injections of mercury.

Hyperæsthesia of the labyrinth is found in anæmia, after diseases of the ear, injuries to the head or ear, and in various neuropathic and psychical conditions. It is the principal predisposing cause of vertigo; a permanent lesion of the ear serves as an occasional cause, and accounts for repetitions of the attack.

The treatment of this morbid condition and its results is sulphate of quinine in doses of 0·60 grm. to 1 grm. for eight days, to be repeated if necessary after an interval. If a neurosis coexists cold douches are very useful, and they are also useful even when the vertigo is due to serious (even suppurative) diseases of the ear, if nervous exhaustion is present, as, for example, after influenza. When there is neuralgia of the fifth nerve, or habitual migraine, quinine along with aconitine or arsenic again gives the best results.

In cases of toxæmia, of cerebral, pulmonary, or general microbic infections, the symptoms of vertigo should make one think of the ears; many poisons have an elective action on the labyrinth, e.g., lead, oxide of carbon, soda salicylate, etc.

The internal ear is affected at a distance by diseases of other organs; thus, labyrinthine vertigo is often a symptomatic reflex. A pre-existing hyperæsthesia, or hyperexcitability of the labyrinth, will, of course, predispose to vertiginous attacks. Affections of the stomach have the greatest effect. Cure the dyspepsia and the vertigo ceases, but not the more obstinate deafness. Uterine affections, general diseases, traumas of distant parts, specially of the neck, produce vertigo.

In patients with hæmorrhoids, or gout, the vertigo is either congestive or nervous, often of otitic origin. The sclerosis evolves without any symptoms at the same time as the other more noticeable affections.

Vertigo, therefore, proves the existence of trophic lesions of reflex origin, or the development of alterations in the labyrinthine apparatus. A previous lesion of the ear predisposes to these reflex effects on the nutrition of the internal ear. The treatment must be directed to the causal lesion, not forgetting the actual labyrinthine hyperæsthesia.

M. L. BAR (Nice). *Acute Œdematous Laryngitis in Children.*

Little is said about acute œdematous laryngitis in childhood, yet this condition exists in the child just as it does in the adult. If it is seldom observed, that is because of the difficulty of examining, and specially of using the laryngoscope (which is the only sure method) in children.

Œdema is anatomically the same at all ages, varying according to the cause that has produced it. The narrowness of the larynx and the great looseness of the mucous membrane account for the rapid development and frequent fatal termination of this disease in children. The treatment must vary according to the cause and nature of the œdema. Local treatment is of most importance. Thus sprays strongly charged with tannin, revulsives, Priessnitz's compresses, hot water to the neck, and a gentle emetic, are often sufficient. Potassium bromide should be given internally, and aconite only used for spasmodic and febrile conditions. In serious cases little should be expected from laryngeal intubation, and it should be remembered that tracheotomy will be the more successful the earlier it is performed. To be effective it should be done before the laryngeal stenosis has caused grave symptoms of asphyxia.

M. RAOULT (Nancy). *Opening of the Tympanum for the Extraction of a Foreign Body.*

A girl, ten years old, had pushed into her left ear a button of the shape of a lentil, and seven millimètres in diameter. Unsuccessful attempts to extract this had only succeeded in forcing it through the membrane and into the tympanic cavity. I attempted to remove it under chloroform, but finding it firmly fixed by the swelling of the soft parts, I was compelled to open into the tympanum.

I detached the auricle, and dissected along the meatus as in Stacke's operation, then removed the upper external wall of the tympanum with a gouge. This enabled me to extract the button. The mucous membrane below was swollen and bleeding. I washed out with sublimate solution, then packed with iodoform gauze. It was dressed at first every second day, and later every third or fourth day; recovery was complete in twenty-two days. There remained only a slight atresia of the meatus.

M. VACHER (Orleans). *Three Cases of Otitis Media with Mastoid Complications cured without Surgical Intervention.*

A certain number of cases have been published during the last few years, in which patients with mastoid affections have been cured without operation. During the last eighteen months I have seen three such cases, in which, in spite of the gravity of the lesions, cure was obtained by as thorough and as deep-going antiseptic treatment as was possible, combined with the use of ice, revulsives, chloral, etc.

One should therefore not be in too great a hurry to operate, but rather watch the patient carefully, being ready to intervene at any moment. This is specially necessary in the case of children, who, owing to the incomplete closure of the petro-squamous suture, are the more liable to meningeal complications. In treating the tympanic cavity I make use of irrigations of peroxide solutions of 6, 8, 10, and 12 volumes. This cleans the parts more thoroughly than any other fluid.

M. L. EGGER (Paris). *Acute Œdema of the Larynx.*

A woman, enjoying fairly good health, although presenting signs of pulmonary induration, was suddenly seized (in consequence of the emotion

produced by her mother's death) with all the symptoms of acute laryngeal œdema. Three hypotheses may be advanced in explanation of this :—

(1) Vasomotor affections acting on a tuberculous larynx. Considering, however, the good condition of the organ, this explanation may be dismissed.

(2) Infectious œdema, perhaps due to influenza.

(3) Vasomotor disturbances, causing a simple acute angio-neurotic œdema in a tuberculous subject. This is the most probable hypothesis.

M. BONAIN (Brest). *Long and Short Tubes for Intubation of the Larynx.*

The ease of extracting short tubes, without using the extractor, by simple pressure on the trachea, does not compensate for the real danger of their being obstructed either during or after their introduction. This danger is much less to be feared with a long tube reaching down to the lower part of the trachea, and the difficulty of extracting the tube can best be overcome by leaving the thread in position.

M. Bayeux's theory that O'Dwyer's tubes are held in the larynx by the cricoid ring is wrong, as is shown by measurements. The tube is prevented from slipping out by the vocal cords.

M. G. GELLÉ (Paris). *Hydrogen Peroxide in Oto-Rhinology; its Hæmostatic Action.*

This is an excellent hæmostatic, and should be kept by all specialists and all practitioners to treat epistaxis that resists other agents. According to the author this is the ideal hæmostatic, because its action is prompt, causes no pain, and is perfectly innocuous.

M. JOUCHERAY (Angers). *Suppurating Cysts of the Nose.*

A woman, thirty years old, had complained of nasal obstruction for two or three months, and of loss of appetite and of sleeplessness for eight days. The following were the symptoms : fever, almost typhoid condition, swelling of the whole left side of the face, nasal voice, oral respiration, and discharge of thick creamy pus from the left nostril. The left nasal fossa was found full of pus. With the curette I removed (1) some cretaceous masses, forming incomplete cells, very friable, and as large as a medium-sized hazel nut—these lay at the level of the middle and inferior turbinateds; (2) some smaller masses, like sebaceous concretions; all bathed in pus. Only a few drops of blood came away at the end of this curettage. The nose then appeared permeable—almost normal, but the mucous membrane was red, rough, and a little hypertrophied, specially in the middle meatus. I did not wash out the nose, but applied chloride of zinc I in 20, then a large quantity of vaseline and boracic acid, and a tampon. Ten days later the patient returned cured, the general condition much improved; the mucous membrane of the left nose somewhat hypertrophic, but no pus.

This was a case of multiple suppurating cysts of the inferior and middle turbinateds, without extension to the adjacent sinuses. Further, there was a cretaceous degeneration of the walls, with a sebaceous

appearance of the contents of the cysts, which had not yet been liquefied by the suppurative process.

M. CASTEX (Paris). *On Trephining the Mastoid.*

Opening of the mastoid process is required (1) to evacuate pus from secondary mastoiditis (after measles, scarlatina, etc.), (2) to stop obstinate otorrhœas persisting from childhood, and resisting all other forms of treatment, (3) to put an end to secondary neuralgias of the process.

The spine of Henle (*spina supra meatum*), forms a very good guide to the antrum. Great caution must be exercised, specially in the region of the posterior wall of the meatus, lest the facial nerve be injured. The lateral sinus has been encountered in this region, but with no bad results. Little tampons of cotton wool, introduced into the bottom of the field of operation, lessen the shock of the gouge, protect the deeper parts, and on being withdrawn bring away with them any *débris* detached by the gouge. Moist dressings and disinfection of the naso-pharynx are indicated in suppurative tympanitis.

The excellent effect of the petro-mastoid evacuations is striking, because pus shut up in the cavities of the ear seems particularly infectious.

M. MIOT. *On Permanent Artificial Perforations in the Membrana Tympani.*

After having given the indications and counter-indications for this operation in dry otitis media, the speaker declared the most successful form of operation to consist in removal of the membrane along with the handle of the hammer. By this means he had obtained permanent openings twenty times out of twenty-four operations.

The following conclusions were arrived at:—

The best means of completing diagnosis in dry median catarrh is paracentesis of the membrane.

In certain cases, where the operation seems indicated, it must be postponed or given up because of reflex action on the ear.

The best operation is excision of the membrane with the handle of the malleus.

Discharge may take place after perforation, but soon stops without any complications.

Hearing power, though improved, varies greatly. The improvement is much more marked for articulate sounds than for noises. Vaseline and iodine applied from time to time, sometimes glycerine, appear to be the fluids that give the best results as regards hearing power, without causing any serious complications.

An artificial membrane sometimes greatly improves the hearing power.

M. BRINDEL (Bordeaux). *Results of the Histological Examination of Sixty-four Adenoid Vegetations.*

In thirty-nine of these the superficial epithelium had undergone profound alterations, or at least modifications of structure. Many adenoids in adults contain no fibrous tissue framework, and therefore have no

tendency to undergo sclerotic changes. Thirty applications of resorcin to such a case had no effect. In one case in which removal was followed by hæmorrhage I found endarteritis.

I found an affection characterized by retention of epidermic and microbic *débris* and mucus in a crypt closed at the surface. This may be called *lateral lacunar encysted adenoiditis*. Tuberculosis I found only eight times out of the sixty-four cases, but think that is less than the true proportion.

M. WAGNIER. *Direct Laryngoscopy.*

The speaker gave an account of his experience in the use of Kirstein's method of examining the larynx. In certain cases it is easy by this method to make a complete laryngoscopic examination. Its chief use in adults will be for examining the posterior wall of the larynx, but it is with children that it is likely to have its greatest success.

M. P. RAUGÉ (Challes). *Acoustic "Relief" and Binaural Hearing.*

Monaural hearing gives no information as to the direction of sounds. For this (which is to hearing exactly what "relief" is to vision) a bilateral apparatus is necessary. The mechanism by which such a bilateral apparatus gives us the idea of acoustic relief is precisely comparable to that of optic relief; it consists in a dissimilarity in the two sensations experienced by the two sides of the apparatus.

The separation and the different direction of the two ears determines an inequality in the auditory impressions received by them, because any sonorous body, except it be in the mesial line, must be more favourably situated towards one ear than towards the other as regards both incidence and distance; thereupon a sort of unconscious calculation gives us the idea both of the direction and the distance from which the sound comes. Is not this identical with the process by which we perceive objects in space by comparing the two plane images perceived by the two eyes?

That this is not mere theoretical argument is proved (1, by the clinical fact that patients suddenly deprived of the hearing power of one ear lose all idea of the direction of sounds paracusis of position; 2 by the fact that if in a healthy subject one ear is carefully stopped, he can no longer tell from what direction sounds proceed, but recovers that power the moment the ear is freed and bilateral hearing is restored.

M. POLS (Nantes). *A Phosphatic Rhinolith formed round the Kernel of a Cherry.*

This, occurring in a woman fifty-four years old, had caused local and general symptoms such as to raise the suspicion of malignant disease. From its position it had evidently entered the nose from behind. It was extracted, and found to consist of an irregular grey-coloured deposit of calcium phosphate and carbonate, and a little organic matter, but with no alkaline chlorides.

M. LABIT (Tours). *A Case of Eunuchoid Voice.*

There are two kinds of false voice. The one accompanies alterations in the genital organs, the true "eunuch's voice"; the other is produced by

a larynx of normal dimensions, but with some defect of the muscular actions, the "eunuchoid voice." During last year I had under observation two such cases. In the first a space was left between the posterior ends of the vocal cords. In the second the glottis presented an elliptical opening. Vocal gymnastics cured both cases easily and rapidly. It ought to be remembered that when cured the voice is bass. As to the cause, probably there are more than one.

M. MENDEL (Paris). *A Case of Bezold's Mastoiditis.*

The characteristic of Bezold's mastoiditis is that the pus from the antrum, instead of bursting through the external wall of the process, comes through the internal wall at the digastric fossa, works along the digastric muscle, then under the sterno-mastoid, and along the carotid sheath. Only twenty cases have been reported. In almost all, either during or after an otitis media, a painful spot appeared at the superior point of attachment of the sterno-mastoid, followed by a fluctuating swelling there. From that stage, surgical treatment only is of any avail.

I saw one case from the very beginning. The patient was a man thirty-two years old. Fifteen days after the onset of an otitis media he complained of pain in the above-mentioned spot, increased by rotatory movements of the head. No redness nor tumefaction. Soon the patient found that on pressing deeply over this spot he caused a flow of pus from the meatus. As the otitis proper got better the membrane tended to heal, thus shutting in the pus of the cervical abscess, whose only exit was through the tympanum and meatus. I performed paracentesis five times, and by means of injections and instillations per meatum obtained a complete cure in eight months.

M. H. LAVRAND (Lille). *Mutism without Deafness.*

What is the prognosis, and what advice is to be given with regard to children of three, four, and five years of age who do not speak, but who hear perfectly?

The author investigated mutism in children who are not deaf, and who understand what is said to them. Three cases were specially chosen out of a large number, so as to eliminate idiots. In these three cases careful examination showed no abnormality. Vision, hearing, intelligence, the sensory centres for language, as also the psychical centres, all normal. He even believed that the motor centres for articulation existed, and were connected to the other centres for language, but their function was in abeyance. A special gymnastics, a particular education of these centres, was necessary; under this special treatment their latent activity was finally stirred up, and the children spoke.

M. F. FURET (Paris). *Tonsillar Cough.*

Tonsillar cough, which can arise from any pathological change in the tonsil, is to be explained by the complex innervation of this gland, viz., "the tonsillar plexus" of Andersch, formed by the glosso-pharyngeal, lingual, pneumogastric, and spinal accessory nerves. Further, the position of the tonsils is in close relation to the muscular pillars of the

fauces, which again are closely related to the muscular apparatus of the larynx.

The cough is violent and spasmodic, is accompanied by reflexes in neighbouring organs, specially by a flow of tears, and is distinguished from cough due to affection of the respiratory passages by the complete absence of expectoration, and by the fact that ordinary medication has no effect.

Excision of the tonsil in children and removal with the punch in adults are the best methods of treatment.

M. LUC (Paris). *Chronic Empyema of the Frontal Sinus with Granulations; Cure.*

The treatment adopted was that already described by Luc ("Semaine Médicale," 1894, p. 277), consisting of a free opening of the sinus through the frontal bone, curetting and cauterizing the cavity, introducing a drainage tube through the sinus into the corresponding nostril, and closing the wound at once. The tube, being wide above, remains of itself without any special fixing. Through it is injected every day during the first week a one per cent. solution of formol, then a solution of iodoform in ether to keep the parts aseptic. When the purulent discharge has ceased—that is to say, in from ten to twenty days—the tube is pulled out. The first dressing should be removed after four or five days, by which time the wound has healed. This operation was first devised by Ogston, of Aberdeen, and has advantages over any other method. Treatment by syringing from the natural nasal orifice should be tried only in acute cases. Immediate closure of the wound avoids the risk of post-operative erysipelas, considerably shortens the after-treatment, and makes the cicatrix as little visible as possible.

M. SIMONIN (Limoges). *Subglottic Œdema preventing Removal of Canula.*

In two cases of inter-crico-thyroid laryngotomy (one his own and one M. Moure's), in which subglottic œdema prevented removal of the tube, the speaker considered that the difficulty was due to injury to the cricoid ring. It is therefore important, when operating on children, not to carry the incision too high.

M. MOUNIER (Paris). *Treatment of Hæmatoma of the Septum.*

Hæmatoma of the septum, a rather rare result of injury to the nose, presents as a considerable swelling on both sides of the cartilage, impeding respiration to a greater or less extent. It ought to be opened freely and soon, because if left alone the cartilage necroses, and pus is found in place of the blood. After opening with bistoury or galvano-cautery, the pocket should be washed out with Van Swieten's fluid. A complication deserving more notice than has been given it is permanent deviation of the septum.

M. JOAL (Mont Dore).—*Aphonia of Olfactory Origin.*

I have already proved that a close relation of cause and effect exists between certain olfactory sensations and certain vocal disorders, and

have shown that the alterations may affect different parts of the human organism, involving modifications of the resonant, the vibrating, or the motor element.

Out of the ten cases I had then gathered, only one had been examined laryngoscopically, and the aphonia was found to be due to congestion of the larynx. In another case there was, undoubtedly, phonetic spasm.

To-day I wish to bring before your notice the case of a young boy who was seized with adductor paralysis, after being exposed to the influence of menthol during his sleep. There were no local hyperæmic phenomena.

The irritation of the nerve-endings of the olfactory nerve induced a reflex turgescence of the erectile tissue of the nose and an excitation of the twigs of the trigeminal; this produced a second reflex, ending in paralysis of the constrictors of the larynx.

Arthur J. Hutchison (Trans.).

VIENNESE SOCIETY OF LARYNGOLOGY.

Meeting, 5th December, 1895. ("Annales des Maladies du Larynx," etc.

President—Prof. STOERK.

KOSCHIER presented a patient who had suffered four years from a *Wound of the Larynx*, after having been upset by a milk cart.

There was manifest difficulty in deglutition and breathing, for which causes she came to the hospital.

On the external surface of the neck there were several sanguineous deposits; palpation of the hyoid bone, also of the two plates of the thyroid cartilage and of the cricoid cartilage, showed nothing abnormal.

Only in the region of the right superior cornu of the thyroid cartilage was there a spot sensitive to pressure. On laryngoscopic examination there could be distinguished in the right pyriform sinus a large hæmatoma, by which it was almost entirely filled, and which extended below towards the right ary-epiglottic folds, which together with the ventricle it entirely enveloped, and this caused some laryngeal stenosis.

The left half was normal.

In phonation the right half of the larynx was seen to be completely immobile.

Digital examination allowed him to distinguish very exactly the hyoid bone and the two cornua of the thyroid cartilage. This showed clearly that the upper right half moved over the inferior part, and explained the pain suffered by the patient; this place was certainly the location of the hæmatoma.

Basing his opinion upon these facts, Koschier thought the diagnosis of this case was a fracture of the right superior cornu of the thyroid cartilage.

EBSTEIN. *Report of a Case of Malignant Syphilis.*

The patient, a man thirty-seven years of age, was very badly nourished. Primary symptoms in October, 1894. In the course of the same month, iodide treatment. No consecutive exanthem; but, in the fifth month of the illness, numerous ulcerations on the head appeared, which cicatrized in two and a half months by means of thirty frictions with Zittmann's decoction and iodide of potassium. In July, 1895 (six months afterwards), an abundant nasal suppuration appeared, accompanied by a discharge of small bony particles. Re-entering the clinic of Prof. Kaposi, neither four months' general treatment nor a stringent local treatment could check the disease, which caused total denudation and necrosis of the vomer, the horizontal and perpendicular plate of the palatine bone, of the three right turbinateds, and of the left middle turbinated.

Moreover, there existed a diffuse gummatous infiltration of the nasopharyngeal roof and of the lateral wall of the pharynx, and an extensive perforation of the vault of the palate. The perpendicular plate and the cartilaginous septum were absolutely wanting. The case is remarkable for the extent of the destruction, produced thirteen months after infection, in spite of six and a half months of intensive treatment. The malignity of the disease is explained by the cachectic condition of the patient.

EBSTEIN also reported *a Case of Fluctuating Œdematous Tumours in the Region of the Processus Vocalis, Pronounced Tumefaction of the Tracheal Mucous Membrane, and Dry Bronchitis, following the use of Amorphous Salicylic Acid.*

In the discussion following this last communication, HAJEK asked if fluctuating tumours were seen over the vocal processes, because it was well known that in this part the mucous membrane adheres very closely, and that there is no loose tissue.

EBSTEIN replied that the tumours were not situated directly upon the vocal processes, but in the immediate neighbourhood, projecting inwards.

STOERK said he had observed the evening before, at his clinic, a patient suffering from profuse rhinitis, having tumours of this nature situated directly upon the vocal processes.

WEIL asked Ebstein if the patient's attacks were the same as in the course of ordinary bronchitis, or if he were not troubled with bronchial asthma.

EBSTEIN replied that there was irritation as in simple bronchitis.

CHIARI drew attention to the well-known fact that salicylic acid, inhaled, irritated the mucous membrane. Also that for some time surgeons have given up the use of salicylic acid in laryngeal and tracheal operations.

RETHI showed *a Snare for Amputating the Anterior Hypertrophied Extremity of the Turbinateds.*

There is frequently difficulty in performing this operation. In cases where the extremity of the turbinateds, more or less circumscribed, is very prominent and has an irregular surface, it is easy to employ the snare, especially when the galvano-cautery loop is used, and by the momentary

penetration of the current a furrow is produced, then an artificial pedicle ; but in cases where the hypertrophy reaches the neighbouring mucous membrane, and is not pronounced, or if there is a smooth surface, and especially a swollen tissue which contracts at the first touch, the loop cannot be used.

The extremity of the turbinateds can also be removed by introducing the snare in front and tightening it from before backwards ; but this method frequently fails, because the metallic thread at the end of the instrument twists easily, thus preventing further diminution. It has also been proposed to insert a needle through the extremity of the turbinated (and Jarvis has had a special needle made), then to apply the wire, so as to prevent its slipping off ; but this method especially is so uncertain that it is little recommended. Galvano-cautery operations and ablation with the scissors meet much opposition, and are not always possible.

Rethi has made an instrument combining the needle and the snare, allowing the operation to be effectually performed at one time—that is to say, to pierce the extremity of the turbinated, and then to tighten the loop.

BIENENSTOCK. *Essay on the Statistics of Nasal Affections and their Consequences.*

The author describes, first, the different nasal affections according to their frequency, then presents statistics according to age, and divides them into eighteen curves, where the frequency of each disease corresponds directly to each age.

These embrace 3547 nasal affections (comprising 11,352 patients) observed during the years 1892-93 and 1893-94 at the laryngological clinic in Vienna. After the curves of chronic hypertrophic rhinitis and chronic atrophic rhinitis, it appears that at Stoerk's clinic catarrhal affections augment notably in frequency at the age of puberty.

Bienenstock insists again upon the influence of puberty in nasal affections ; he also develops a new theory on the etiology of deviations of the nasal septum.

R. Norris Wolfenden.

ABSTRACTS.

DIPHTHERIA, &C.

Armstrong, G. E.—*Antitoxin Fatalities.* "New York Med. Times," June, 1896.

In an editorial, reference is made to the recent death of the child in Berlin from the use of antitoxin as a prophylactic. Mention is also made of a similar fatality which occurred in Portsmouth, Ohio, and which was reported in a late number of the "Journal of the American Medical Association." In this journal, also, Struch has advanced the idea that the decrease in mortality from diphtheria, as shown by statistics, since the introduction of the antitoxin treatment, should not be

ascribed exclusively to that treatment. He thinks a very important factor is that the serum-therapy, though not absolutely harmless, is less harmful than the drug treatment formerly used, and favours hydro-therapy as a still better procedure.

A. B. Kelly.

Atwood, C. A. (Taunton, Mass.). — *A Case of Laryngeal Diphtheria; Tracheotomy; Recovery.* "Boston Med. and Surg. Journ.," April 23, 1896.

A CASE of laryngeal diphtheria where tracheotomy was performed on account of the great tracheal obstruction. The treatment consisted of injections of Gibier's antitoxin. The patient made a good recovery in about twelve days. Notwithstanding immunizing injections of antitoxin, all the other members of the family, with the exception of an infant at the breast, were attacked by the disease, but made extremely rapid recoveries. The author sums up strongly in favour of the antitoxin treatment.

St George Reid.

Beauchant. — *Scarlatina and Early Diphtheritic Angina.* "Ann. des Mal. de l'Oreille," Feb., 1896.

THE author thinks that the opinion held by many authorities that diphtheria complicating scarlatina only occurs late or during the convalescent stage is not exact. He thinks that these two conditions are only associated from the commencement. He relates four cases in detail, with bacteriological examinations, in which pseudo-membranous angina was accompanied with scarlatina, the eruption appearing three to four days after the onset of the angina. In two of these cases Loeffler's bacillus was distinctly observed. In his first observation there were three cases of scarlatina in a family where a little girl had presented three days before an angina with false membrane, not accompanied with eruption, which appears to have been clearly diphtheritic. The other cases are not so clear. The author analyzes them very carefully, and deduces the following conclusions:— 1. Diphtheria and scarlatina have relations much more intimate than is generally supposed. 2. Diphtheria may develop secondarily in the course of scarlatina or during convalescence. We see also not rarely scarlatina supervene in the course of a diphtheritic angina, and the two affections may be coincident. 3. In some cases when scarlatina is superadded to diphtheria it may modify profoundly the course of this disease, and even cause the complete disappearance of Loeffler's bacillus.

R. Norris Wolfenden.

Bernheim, P. (Berlin). — *Remarks on the Serum Treatment of Diphtheria.* "Therap. Monats.," June, 1896.

STATISTICS based on hospital results contain so many sources of error that but little reliance can be placed in them. The seemingly wonderful results obtained by serum treatment are more apparent than real.

The author lays no stress on bacteriological diagnosis of diphtheria in this paper, but deals entirely with "clinical diphtheria," as observed by him during the twenty years, 1876-96. Scarlatinal diphtheria and all cases presenting the clinical picture of lacunar or follicular tonsillitis are left out of account. It is quite certain that as diphtheria increases or decreases (both as to number and severity) so does lacunar angina; it is therefore probable that the same influences, that make of the pharyngeal and tonsillar mucous membranes a suitable culture ground for the Loeffler bacillus, also favour the growth of streptococci. Further, it is highly probable that very many of the cases formerly diagnosed "follicular tonsillitis" would now, from bacteriological investigation, have to be considered diphtheria.

The author then proceeds to deal with the alteration that has taken place in the virulence of diphtheria since he first knew it in 1876. His cases fall into three groups:—

1st	from 1876-1880 ...	57 cases with 15 deaths = 26.3 per cent. mortality.
2nd	„ 1881-1886 ...	222 „ „ 46 „ = 20.5 „ „
3rd	„ 1887-1896 ...	135 „ „ 19 „ = 14 „ „

This shows—without serum—a decline in mortality of twelve per cent. within twenty years.

The explanation of this is simple. Every doctor who has been in practice more than fifteen years, and has carefully watched the progress of diphtheria during that time, must be aware that the last eleven years represent the period of decline of a very severe epidemic, during which not only has the number of cases but also the virulence of each attack diminished.

The virulent cases, with purulent, stinking discharge from nose and mouth, that soiled the whole bed of the restless child, and changed the mouth into an ill-coloured slimy surface, and with the glands of the neck, right down to the clavicle, swollen and hard as boards: these cases were then as common as they are now rare. Even in such cases we used sometimes to see—often in a night—all these happy changes occur, which are now ascribed to the action of the serum.

The results obtained from serum treatment by different observers are absolutely contradictory. It raises the temperature, it lowers the temperature; it quickens the pulse, it slows the pulse; and so on. Again, the rapid disappearance of the pseudo-membranes and of glandular swellings in severe cases occurs apart from serum treatment; but far from being a sign to welcome, it is to be regarded as an almost sure forerunner of a rapid, fatal termination of the case.

Serum has no specific action; all the old symptoms appear now as they used to do in the old ever-varying manner.

The author has used the drug only four times. One case was recovering before the drug could be procured; the second recovered no quicker than his brothers and sisters who got no serum; the third recovered, but suffered from a coxitis, first on the right then on the left side, which the author unhesitatingly ascribes to the serum; the fourth died.

Neither clinical experience nor statistics has so far confirmed the hopes that were first raised by serum treatment, and they will be completely destroyed by the outbreak of the first severe epidemic.

Arthur J. Hutchison.

Krückmann (Neukloster). — *A Case of Poisoning by Behring's Serum.* "Therapeut. Monats.," June, 1896.

ON 21st January Dr. Krückmann went to the country to treat a patient for diphtheria. The patient coughed violently in the doctor's face. He, therefore, boiled the syringe he had just used and gave himself a prophylactic injection in the dorsal surface of the left fore-arm. A swelling about ten centimètres long by five broad at once appeared. No redness or pain. Half an hour later violent itching of the scalp came on, extending down into the neck, where it became more a prickling sensation. About half an hour later, on reaching home, there came on angina cordis, giddiness, tinnitus aurium, extreme weakness, and staggering. It required great exertion to go to his bedroom and undress. Temperature, 39° C.

The arm gradually swelled up, without, however, being specially painful. Later followed paralysis of the extensors of the fingers. There was no shivering, but extreme turgescence of the skin, so that the face was purple. Next the feet became ice-cold—this extending half-way up the calves—and an itching and

prickling eruption appeared over the whole body (feet only excepted). Skin dry; pulse imperceptible; oppression and distension of abdomen only slightly relieved by vomiting and small normal motions.

Several times faintness was so marked that *exitus letalis* seemed probable. By nine o'clock in the evening this danger was past. Then several beneficial sweatings—each lasting only a very short time—came on, and towards midnight the rash began to disappear. No urine was passed till two o'clock next day (*i.e.*, twenty-four hours, nearly, from time of injection). By three o'clock recovery was far enough advanced to permit of return to work. The following day the lower lip swelled up, and the point of the tongue became more pointed, but only for a few hours.

The patient whom the doctor had injected with the same serum had no unusual symptoms. The day after receiving the injection he was much improved, with no fever, no complications, and wishing to get up.

Arthur J. Hutchison.

Marsh, E. L.—*Diphtheria Treated with Antitoxin in Glasgow Fever Hospital* "Glasgow Med. Journ." May, 1896.

THE effects of antitoxin treatment in this hospital have been very striking, a is shown in the following table:—

Year.	Admissions.	Deaths (per cent.).
1890	88	39·8
1891	80	38·8
1892	78	37·2
1893	153	40·5
1894	245	35·5
1895	179	14·0

During the year 1894 only nine of the severest cases were treated with antitoxin, but during 1895 all suitable cases were so treated. Along with antitoxin a throat spray of saturated boracic acid solution was used; also in very severe cases a steam soda spray; also whisky or brandy, and during convalescence tonics.

The results in tracheotomized cases were equally good.

Thus the lowest previous mortality under five years old was 77·2 per cent., as against 38·1 per cent.

„ „ „ between five and ten years old was 72·2 per cent., as against 25·0 per cent.

„ „ „ all ages was 70·2 per cent., as against 34·5 per cent.

The returns of the medical officer of health show that these results are not to be explained by any alteration in the type of disease prevailing during 1895.

The importance of early treatment is also brought out:—

Of those treated during first week	15·9 per cent. died.
„ „ „ second „	17·6 „ „
„ „ „ third „	40·0 „ „

Arthur J. Hutchison.

Russell.—*A Review of the Antitoxin Treatment of Diphtheria.* "Birmingham Med. Rev.," June, 1896.

IN addition to a lengthy review of statistics that have been published, the author has compiled the following tables of cases occurring in the Birmingham General Hospital:—

TABLE A.
ANTITOXIN CASES, OCT. 11, 1894, TO NOV., 1895.

Age.	Cases.	Deaths.	Percentage Mortality.
Under 1	1	1	100
1—2	6	5	83·3
2—3	7	3	42·8
3—4	4	1	25
4—5	7	5	71·4
5—10	15	4	26·3
10—15	10	0	0
15—20	3	1	33·3
20—30	5	0	0
Over 30	1	0	0

TABLE B.
Forty-six cases occurring in five preceding years treated without Antitoxin.

Age.	Cases.	Deaths.	Percentage Mortality.	Total Cases.	Percentage Mortality.
Under 1	2	2	100	2	100
1—2	10	9	90	13	69·2
2—3	7	5	71·4	8	62·5
3—4	8	6	75	11	54·5
4—5	4	2	50	6	33·3
5—10	12	5	41·7	19	26·3
10—15	1	0	0	3	0
15—20	1	0	0	1	0
20—30	0	0	0	0	0
Over 30	1	0	0	1	0

TABLE C.
TRACHEOTOMIES.

Age.	Antitoxin Cases.	Percentage Mortality.	No Antitoxin.	Percentage Mortality.
Under 1	1	100	2	100
1—2	4	100	9	88·8
2—3	4	25	4	100
3—4	3	33·3	7	71·4
4—5	5	60	3	66·6
5—10	4	50	9	44·4
10—15	0	0	0	—
15—20	1	100	0	—

Day of Disease when Patient admitted.	Antitoxin Cases.	Percentage Mortality.	No Antitoxin.	Percentage Mortality.
1	4	50	2	100 (33·3)*
2	11	0	4	75 (37·5)
3	10	30	5	80
4	8	50	4	50
5	4	50	0	0
6	3	66·6	0	0
7 and over	3	100	4	0

* Figures in brackets denote that doubtful cases are added to undoubted ones, and thus percentage varies.

The author thinks that the death rate of the tracheotomies performed in the cases treated with antitoxin affords the strongest evidence in favour of the treatment.

The following statistics are quoted :—

1.	Mortality before introduction of antitoxin	77·5 per cent.
..	.. after	52·4 (Körte)
2.	.. before	59·5
..	.. after	48·4 (Metropolitan Hospitals)
3.	.. before	79
..	.. after	34·5 (Marsh)
4.	.. before	75
..	.. after	59·1 (Birmingham)

At the end of this very thoughtful and carefully reasoned contribution to this question, Dr. Russell once more lays stress on this diminution of the tracheotomy mortality, which he considers is the one unassailable piece of evidence that we have before us, and proves antitoxin to be of value.

Burchell J. Barron.

NOSE, &c.

Baber, Cresswell.—*Notes on the Diagnosis of Latent Abscess of the Maxillary Antrum.* "Brit. Med. Journ.," June 27, 1896.

THE author describes the recognized diagnostic methods, and recommends in doubtful cases puncture through the inferior meatus with Grünwald's trocar and canula. Where no pus appears on aspiration through the canula, he employs Grünwald's method of injecting air and inspecting the middle meatus for discharge of pus. Aspiration may also be repeated after the air injection—a manoeuvre which after previous failure may give a positive result, due to the frothing of the pus, bringing the latter to the level of the orifice of the canula.

By tilting the head well back the most dependent part of the antrum may be reached by the canula. Grünwald recommends repeated diagnostic puncture when results are negative and symptoms marked, on the supposition that the cavity at one time contains pus, at another none.

In twenty-six cases the author has never failed to reach the antrum, and has seen no ill results.

Ernest Waggett.

Fürst, L. (Berlin).—*On the Treatment of Rhagades and Coryza Sicca in Young Children.* "Therapeut. Monatshefte," June, 1896.

DRYNESS of the nasal mucosa and the formation of fine fissures at the orifices of the nostrils are very common and troublesome affections in children. Painting with a one per cent. solution of nitrate of silver will cause any fissures present to heal, but does not affect the dryness of the mucous membrane, so the fissures return again. In young children the result of the dryness of the nasal mucosa is, first of all, that any mucus present is not removed sufficiently, but accumulates, mixed with dust and bacteria, into little lumps and crusts, which may interfere with nasal respiration to a very considerable extent. Further, the mucous membrane loses its elasticity, and even undergoes a kind of atrophy. Older children help the formation of the fissures by scratching inside the nose with their finger-points and nails. Treatment must, therefore, commence with the removal of all crusts, etc., which is best done by washing out with—

Sod. Chlorat.....	0·5
Acid. Boric	1·0
Aq. Dest.	100·0

Then carefully paint with boro-glycerin-lanolin (Byrolin; Graf & Co., Berlin). At the same time, fissures are to be treated, as above, with silver nitrate.

Arthur J. Hutchison.

Frank (Kirchheim and Tock).—*A Case of Aërial Goitre.* "Münchener Med. Woch.," No. 22, 1896.

THE patient, a man of fifty-three, who had never suffered with goitre and whose family was free from the disease, presented himself for treatment, with the following history. In 1870 he was wounded in the neck by a rifle bullet; whilst under treatment he felt a little crackling, as if something had ruptured. Some years later he noticed, on coughing, that a tumour developed in his neck which afterwards disappeared. On examination a tumour the size of a small apple is found on the right side in the jugular fossa. During coughing a tumour the size of the fist arose on either side. The author thinks that this is an aërial bronchocele, and not a tracheocele.

Michael.

Gleitsmann, J. W. (New York).—*Treatment of Diseases of the Accessory Cavities of the Nose.* "Annals of Ophthal. and Otol.," April, 1896.

THIS is a short paper on the diagnosis and treatment of empyema of the accessory cavities, not professing to be complete or to contain anything new. Only one or two points need be referred to.

Diagnosis.—If pressure on the anterior wall of the frontal sinus or tapping the glabella excites pain or increases the headache, "an affection of the frontal sinus is almost certainly present." Transillumination, although its value has been somewhat overrated, ought never to be omitted, as a positive result confirms a doubtful diagnosis. It is most useful in antral cases, but much less satisfactory in dealing with the frontal sinus.

Treatment.—Simple cases of antral empyema can be treated through the inferior meatus, but the more obstinate cases must be opened into through the alveolus or canine fossa. When in doubt as to whether a case is one of frontal or ethmoid disease, Gleitsmann prefers to deal first with the ethmoid cells, opening them, irrigating and applying powders and caustics.

In dealing with the frontal sinus, as intranasal treatment does not promise good results, the external operation is preferable; the incision should be through the eyebrow.

Opening the sphenoid sinus is not difficult, as the anterior wall is generally implicated and softened by disease. Sphenoid disease is not so dangerous as some American specialists consider it, but requires a longer time for treatment than do affections of the other sinuses.

Arthur J. Hutchison.

Hansell, Howard F. (Philadelphia).—*A Case of Acute Loss of Vision from Disease of the Ethmoid and Sphenoid Cavities.* "Philad. Polycl.," May 23, 1896.

REPORT of a case showing the following symptoms: A boy, aged seventeen, in fair health, was suddenly seized with severe headache, principally in the frontal region; this was followed by failing sight and mental dulness. Upon examination the following was the ocular condition: lids and conjunctivæ normal; cornea and anterior chambers clear; irides moderately dilated, not responsive to light; lenses clear; vitreous chambers clouded by minute opacities; the optic discs were pale, the arteries contracted; there was no optic neuritis; each retina was oedematous, showing a few greyish curved lines marking linear detachments of the retina from the choroid; vision was reduced to a perception of light. On examination of the nose the turbinals were found swollen, completely obstructing

the passages, with considerable secretion of muco-pus posteriorly. Upon contraction after the application of cocaine, pus was seen to be flowing freely from both the superior and middle meatus, right and left, and from the upper and back part of the left fossæ. Transillumination of the maxillary and frontal sinuses led to the diagnosis of acute purulent inflammation of the anterior and posterior ethmoidal cells on both sides and the left sphenoidal sinus. Atropin internally, and appropriate local treatment, relieved the inflammation, and the nasal condition was normal in about ten days; notwithstanding all treatment, however, and although the changes in the vitreous and retina disappeared, the vision remained seriously defective and showed little improvement. No symptoms other than those described, namely, pertaining to the eye and nasal cavities, were elicited, after the most careful scrutiny. The author therefore concludes that we must depend on the ocular and nasal examination to determine the source of the blindness.

St George Reid.

Kenny, A. L.—1. *Ulceration of the Tip of the Nose.* "Australasian Med. Gazette," April 20, 1896.

TUBERCULIN had been injected twice without effect; a third very strong injection caused intense general reaction, of the effects of which the patient complained for a month. The local reaction was slight, but the ulcer commenced to heal, and is now completely covered with skin. In the opinion of some members, the healing was not yet perfect. Emplast. salicylic acid and creosote (Unna) was used locally, but not until the reaction was established.

2. *Microscopic Specimens of a Naso-pharyngeal Sarcoma* removed from a young man, aged twenty. The growth commenced at the roof of the naso-pharynx, filled the whole cavity, causing complete nasal obstruction, and bled profusely on the slightest touch. An operation, as for post-nasal growths, was performed by the mouth, with cutting forceps and curettes, and zinc chloride was afterwards liberally applied. Some time previously another surgeon had removed a mass of sarcomatous glands from the left side of the neck, below the ear and behind the angle of the jaw. There is some recurrence in this part. The specimens were round-celled sarcoma.

Kent-Hughes, W.—*Case of Empyema of the Antrum.* "Australasian Med. Gazette," April 20, 1896.

A GIRL, aged twenty-two, for two years had had symptoms of antral disease, and three months previous to operation pus had discharged into the mouth after extraction of the second bicuspid. The facial wall of the cavity was chiselled through, and the pyogenic membrane thoroughly removed by scraping. The antrum was stuffed with gauze for ten days, the gauze being renewed daily, and the cavity was well irrigated with carbolic lotion (one in sixty). At the end of that period the wound was allowed to close.

A. B. Kelly.

Lichtwitz.—*Complications of Empyemas of the Accessory Cavities of the Nose.* "Ann. des Mal. de l'Oreille," Feb., 1896.

COMPLICATIONS may involve (I.) the neighbouring organs, nasal fossæ, pharynx, ears, eyes, or be cranio-facial; (II.) distant organs, the bronchial branches, digestive tube, etc.; (III.) the general condition, enfeeblement, loss of flesh, fever, etc.

I.

1. *Nasal Fossæ.*—The mucous membrane of the turbinateds may be atrophied, as in thirteen of the author's cases, and may simulate true ozena. Three of his patients had been previously treated for ozena, which he cured by treating the

sphenoidal sinus. Six others had employed nasal douches, and been cauterized; in these the nasal secretion diminished after the first irrigation of the sphenoidal sinus, and cephalalgia ceased entirely. In three other cases there seemed to be true ozæna with propagation to the sphenoidal sinus, and in the last case only maxillary sinusitis had been detected.

Hypertrophic rhinitis is frequently met with. In these cases the affection of the sinus appeared to resemble caseous coryza, the left maxillary sinuses being filled with thick fetid pus. There was also slight exophthalmos with left strabismus and diplopia and terrible cephalalgia. A malignant tumour of the superior maxilla was thought of; the patient, however, was cured by evacuation of the pus from the nose and antrum. Two other patients presented a similar condition of the frontal sinus and ethmoidal cells, but without orbital symptoms. In both the head symptoms were cured on removal of the pus. In twelve cases he found small polypi or granulations over the semilunar hiatus, and in eighteen cases large mucous polypi, filling both sides of the nose, along with unilateral sinusitis. The polypi were probably rather the cause than the consequence of the empyema. Kakosmia was present in a third of his cases.

2. *Naso-Pharyngeal Cavity and Oral Pharynx.*—Many of his patients, chiefly those with sphenoidal or frontal sinusitis, presented symptoms formerly described under the name of naso-pharyngeal catarrh, or Tornwaldt's disease. In many of his cases he has noted a complication of swelling and abscess of the palatine and pharyngeal tonsils.

3. *Eyes.*—He has only observed the following complications in these cases: dacryo-cystitis, three times, in two cases due to suppuration of several sinuses, and in one case to suppuration of the maxillary antrum; two cases of exophthalmos; and once he observed intense injection of the retinal veins in a patient who for twenty-four years had suffered from frontal sinusitis: they recovered their normal aspect when the empyema was cured. In two of his cases there was atrophy of the optic nerve, limited in one of his patients to a portion only of the retina: this patient had suppuration of the frontal sinus with irruption of the pus into the orbit. In the other case it was probably due to sphenoidal sinusitis. Once he noticed papillary inequality in a case of sphenoidal sinusitis.

4. *Ears.*—He has observed fifteen cases of old or recent suppurative otitis, once with mastoiditis; seven times sub-acute otitis; fourteen times chronic median otitis, with or without Eustachian obstruction; nine times nervous buzzings, and three times vertigo.

5. *Cranio-Facial Complications.*—The most frequent is cephalalgia, generally when the sinusitis is sphenoidal or frontal. Four times he has found facial neuralgia with maxillary sinusitis. In one of his cases irrigation of the right sphenoidal sinus caused epileptiform crises, with loss of consciousness.

6. *Cutaneous Affections of the Face.*—Five patients had recurrent erysipelas: he believes it to be a consequence and not a cause of sinusitis. Nasal eczema and acne rosacea have been observed by him in several cases. He has seen erythema and fugitive cedema after injection of antiseptic fluids.

II.

7. *Bronchial Complications.*—He has often seen acute or sub-acute laryngeal catarrh, twice with thickening of the cords, and many times with pareses of the glottic constrictors. Pseudo-phyma—this complication has not been sufficiently studied. In seven of his cases several distinguished *cofrères* had diagnosed pulmonary tuberculosis; this, however, was only a temporary broncho-pneumonic process originating in empyema of the sinuses. We find congestion and sub-crepitant râles at the apex, or only roughness of the inspiratory murmur, which

sometimes dates from a long period antecedent: the symptoms appear and disappear frequently: there is no Koch's bacillus, and the lesion disappears after treatment of the sinusitis. The condition is probably caused by penetration of pus into the bronchi, specially during sleep. Sometimes rebellious bronchorrhœa follows. One of his patients had signs of a pulmonary abscess or lobular pleuritis. Three times he noted cough, disappearing only after evacuation of the sinus; five patients had symptoms resembling asthma.

8. *Elementary Symptoms*.—Four times he found dyspepsia, and three times rebellious diarrhœa alternating with constipation, and he believes these symptoms to be more frequent still.

9. *Vascular and Cardiac Affections*.—One of his patients, with empyema of all the sinuses, had a slow pulse, 28-30 to the minute, which became normal after treatment. In two patients with old maxillary sinusitis he found two attacks of phlebitis to have occurred. He thinks that in a case of aortic insufficiency sinus suppuration may have been the origin of an endocarditis, and that renal affections which he has met with, articular inflammations, and myalgias observed in some of his cases may have had this origin.

III.

General Affections.—He has noted general enfeeblement and loss of flesh ten times, fever four times, insomnia three times, unconquerable somnolence three times, aprosexia twice, cerebrasthenia several times, and pronounced melancholia four times. Crises resembling *petit mal* in a boy of ten were cured after removal of the pus from the sphenoidal sinuses.

Treatment.—He prefers opening into the maxillary sinus through the alveolar apophysis or canine fossa. For the frontal and sphenoidal sinuses irrigations through the natural orifices have always been sufficient for him, though he has often had to remove the middle turbinated, and enlarge the orifices. Wherever it is possible he prefers the endo-nasal treatment.

R. Norris Wolfenden.

Makuen, G. Hudson (Philadelphia).—*A Case of Stammering Cured by an Operation*. "Med. and Surg. Rep.," May 23, 1896.

ON examination of the case, defective tongue-action, an elongated uvula, and adenoid hypertrophy were found. When asked his name he was unable to tell it, although he made violent efforts to do so. The difficulty seemed to be at the base of the tongue, and even when no attempt was made at speech there were peculiar twitchings of the lingual and facial muscles. The diagnosis arrived at by the author was that of chorea of the facial, lingual, pharyngeal, and laryngeal muscles, chiefly due to adenoid hypertrophy, and in part to some deviation from the normal in the genio-hyo-glossus muscle. The child was put under ether, the frenum of the tongue divided well back, and the adenoids removed. Frequent lingual traction was afterwards made to keep the cut edges of the frenum from uniting. Vocal exercises were prescribed, and a cure quickly effected.

A. B. Kelly.

Milligan.—*Foreign Bodies in the Nose* (Three Illustrative Cases). "Med. Chron.," June, 1896.

IN two of these patients a boot button was the foreign body, in the other a rhinolith. The careful use of the probe, usually under an anæsthetic, is rightly insisted on. Angular forceps, snare, Volkmann's spoons, and bent probes are all useful for removal; also irrigation and the use of Politzer's bag up the unaffected nostril may dislodge the foreign substance. Both are, however, distinctly dangerous, especially the former, unless the dislodgement takes place at once, owing to the risk of setting up middle-ear mischief.

Barclay J. Baron.

Sattler, Eric E. (Cincinnati).—*Atrophic Rhinitis, with a New Idea as to its Causation and Treatment.* "Clin. Chron.," May, 1896.

THE following are the author's conclusions:—(1) Atrophic rhinitis is a genuine, distinct disease of the nose. (2) It is never a sequel or later stage of true hypertrophic rhinitis. (3) It is not caused by syphilis, tuberculosis, or scrofulosis. (4) It is a disease of the female sex. (5) It is caused by a true degenerative process of the trophic fibres or roots which supply the parts of the nasal membrane involved. It is, therefore, essentially and primarily a nerve disease. (6) Being primarily, then, a degenerative process of the nerve fibres or centres, it is never completely curable. It may be arrested, perhaps, and sometimes is, at some stage of the process. (7) Its treatment is symptomatic—local and constitutional. Local treatment consists in a thorough systematic cleanliness of the parts involved; personal attention to the removal of all crusts; restoration of the function of the membrane as far as possible; and prevention of the consequences of the nasal trouble in the naso-pharynx, pharynx, larynx, and trachea. Constitutional treatment consists of remedies directly in accord with the theory of nerve degeneration advanced, as well as general building up of the system and the stamping out of any dyscrasia that may be associated with, but is not the cause of, the disease. (8) The disease should be termed "trophic rhinitis" rather than "atrophic rhinitis," the atrophic condition being only a symptom. *A. B. Kelly.*

Sattler, Eric E. (Cincinnati).—*Interesting and Instructive Cases.* "Clin. Chron.," May, 1896.

A Button in the Right Nostril for Four and a Half Years.—A girl, aged seven, was brought to the author on account of an occasional bad odour and discharge from the right nasal cavity, and headaches over the right half of the head. About five years previously she had pushed a button into her right nostril. Attempts made to remove it, immediately afterwards, failed. The author found the button wedged between the inferior turbinate and septum, and withdrew it easily. It measured over five-eighths of an inch in diameter. It was covered with mucus, but no concretion had formed around it.

Congenital Ossous Occlusion of the Right Posterior Naris.—A lady, aged twenty-four years, consulted the author in regard to a constant profuse mucous discharge from the right side of the nose, which she was unable to expel. She had never breathed through the right nasal cavity. Examination of this cavity revealed great hypertrophy of the inferior turbinate, and, on passing a probe backwards, a solid wall of hard, bony tissue was encountered everywhere. It seemed perfectly smooth, and sprang from the vomer, one and a half to one and three-quarters of an inch from the vestibule. The septum was perfectly straight. By posterior rhinoscopy this unilateral wall of tissue was seen very plainly. Its thickness was estimated at about one-twelfth of an inch. Operation was confined to the cauterization of the inferior turbinate, which effected a diminution in the amount of secretion.

Congenital Ossous Occlusion of the Left Posterior Naris.—This was the case of a lady, aged about thirty years, who had never breathed through the left side of her nose, and had been constantly annoyed by a muco-purulent discharge from this side. The septum was greatly deflected to the left, so that it was impossible to see beyond the deviation. With a probe the posterior part of the nose was thoroughly examined, and a hard, thick obstruction found everywhere. Posterior rhinoscopy revealed a complete closure of the left posterior naris, and a thick ridge of bony structure extending from the lower part some distance into the naso-pharynx, on a level with the floor of the nose. The large anterior deviation of the septum was

first sawed off. A very large, hard, middle turbinate was then found to obstruct a great part of the passage. This was removed, and finally the posterior osseous walls perforated and kept open. The case is still under treatment.

Congenital Web of Larynx.—The patient was a boy, aged thirteen years. His parents had noticed that from birth he had neither cried nor made any sound. Distortion of his face alone showed them when anything was wrong. As he grew up he began to talk in a whisper. When seen by the author he still spoke in a whisper, and if he ran he became short of breath; otherwise his physical condition was good. The laryngoscope showed a web between the cords in front of the vocal processes. It appeared dense and fibrous, and the opening that remained could only have allowed the passage of an ordinary lead pencil. Operation was strenuously urged, but refused by the parents. *A. B. Kelly.*

Seiler, Carl (Philadelphia).—*The Importance of Specific Gravity of Liquids for Topical Medication.* "Med. and Surg. Rep.," May 23, 1896.

THE author calls attention to the importance of having washes, douches, dressings, etc., of a density equal to that of the serum of the blood, so that there may be no interchange by osmosis between the cells or blood-vessels of the tissues and the topical application. In the nose, if the fluid used is of less density, the venous sinuses will become surcharged, thereby causing swelling and pressure upon the nerve filaments, and, consequently, in the first instance pain, and as a secondary effect congestion, owing partly to the irritation of the nerves, and partly to the engorgement of the capillaries, so that the object of the wash or douche is defeated. If, on the other hand, the liquid used is of a greater specific gravity than it should be, the watery elements will ooze out of the tissues by exosmotic action, and shrivelling will take place together with an abnormal accumulation of the solid elements, and again pain as well as congestion will be the result.

The author advises that a concentrated solution be prepared by the druggist, and the patient be directed to add a sufficient amount of this to the exact quantity of water. In this way a perfect solution, and one of the proper specific gravity, is obtained.

In most instances neutral unirritating sodium chloride is the best agent with which to obtain the proper specific gravity—by using fifty-six grains of the salt to a pint of water, to which the other ingredients may be added as desired. If, however, alkalies are indicated in a wash, it is best to make the alkaline solution first of the suitable strength, and then to bring it up to the required standard of density by the subsequent addition of sodium chloride. *A. B. Kelly.*

MOUTH, PHARYNX, &C.

Armstrong.—*Carcinoma of the Tonsil.* "Montreal Med. Journ.," June, 1896.

THE case of a man of fifty-nine, a heavy smoker, who began to notice pain on swallowing two months previous to admission.

Very little increase in the size of the growth had been noticed since its first appearance. The tumour was the size of a marble, and grew from the right tonsil. It was hard and gristly, neither tender nor painful, and freely movable in all directions, and had the microscopic structure of epithelioma. Two enlarged glands were detected in the neck, and the anterior pillars were infiltrated. After preliminary tracheotomy the tonsil was removed by a modification of Cheever's

operation. The external carotid was tied below the origin of the facial artery and little hæmorrhage occurred.

The posterior belly of the digastric, the stylohyoid and styloglossus were turned aside and not divided, while the superior constrictor was opened and the tonsil thoroughly separated. The anterior pillar and a portion of the base of the tongue were removed, together with the tonsil, through the mouth.

Good recovery was made, but the prognosis is not considered good.

Ernest Waggett.

Evans, T. C. (Louisville, Ky.).—*Chancre of the Tonsil and Tongue, with Report of Four Cases.* "Med. News," May 9, 1896.

THE author believes that the difficulties of an early diagnosis of primary syphilis of the mouth and tonsils have been over-estimated. He goes on to say that, considering all ulcerative lesions of the mucous membrane of the mouth and pharynx are almost certainly malignant, tubercular, or syphilitic, we can arrive at a diagnosis by exclusion. Three of the cases reported presented a sharply-defined ulcer of the tonsil, surrounded by indurated tissue, and covered by a greyish-white slough; the tonsils were enlarged, and the palate and uvula congested; the cervical glands enlarged and tender.

In the fourth case the apices of both tonsils were covered by a symmetrical pseudo-membranous mucous patch, following an ulcer at the end of the tongue three months previously. All the cases were followed by typical syphilitic eruptions.

The author believes that the crypts of the tonsil form a most excellent nidus for the protection and growth of the syphilitic virus, and concludes by pointing out that the failure on the part of the physician to recognize that syphilis may be contracted in other ways than by improper sexual relations has led many cases to escape being recognized.

StGeorge Reid.

Kayser, Rich (Breslau).—*On the so-called Pharyngo-Therapy.* "Therapeut. Monats.," May, 1896.

UNDER the name "pharyngo-therapy" Heller, of Nürnberg, and Ziem, of Danzig, have described a method of treating nearly all the infectious diseases. The ideas underlying their method are, shortly, as follow:—(1) Most disease-producing germs enter the body in the inspired air. (2) Owing to the peculiar structure of the respiratory tract they are almost all caught and retained in the first part of this tract—viz., the nose, mouth, pharynx, larynx, and trachea; indeed, few pass beyond the nose (or mouth) and pharynx. (3) Therefore, in order to prevent or to treat an infectious disease, it is simply necessary to wash all the germs out of these cavities.

For long it has been admitted that the germs of certain diseases—the so-called miasmatic diseases—exist in the air. To them are to be reckoned probably measles, scarlatina, small-pox; then pneumonia, influenza, whooping-cough; also malaria and cerebro-spinal meningitis, and perhaps acute rheumatism. In diphtheria and tuberculosis aerial is the principal but by no means the only method of infection. In enteric it is only of secondary importance, and in cholera, dysentery, and puerperal fever it is excluded.

The filtration apparatus of the nose, etc., while sufficient for most ordinary purposes, is by no means perfect—witness the various pulmonary diseases from inhalation of dust. Tubercle bacilli, pneumococci, and diphtheria bacilli have been found in the noses of healthy people. If this proves anything, is it not that they are harmless there, and that only the few odd germs that have penetrated further in produce the disease? Lermoyer and Wurtz have shown that nasal mucus possesses germicidal properties; probably also the pharyngeal ring of adenoid tissue acts similarly by phagocytosis.

Measles is the only infectious disease that regularly commences with symptoms referable to nose and pharynx. The first symptoms of scarlatina and diphtheria are usually in the mouth; while in malaria, typhus, pneumonia, etc., the initial symptoms only seldom are in the nose or throat, and tuberculosis beginning there is extremely rare.

All this shows that, while there is a possibility that infectious diseases may begin in the nose and throat, it is a possibility only, not a probability. Now, granted that it were worth while clearing all these micro-organisms out of the nasal and pharyngeal cavities, the question arises, "Can this be done?" Certainly not by any form of syringe or douche. Litres of water may be poured through a nose with *ozæna*, but not clean it thoroughly, and every rhinologist knows the difficulty of removing pus out of a nose so as to make it appear clean even to the naked eye.

Again, suppose it were possible to thoroughly clean all micro-organisms out of the nose, how often ought this to be done? As soon as the washing is finished more micro-organisms are in the air ready to enter, unless a respirator is to be worn all the time. No surgeon believes that by washing his hands three or four times a day he thereby renders them aseptic for the rest of that day.

Further, it must be borne in mind that copious douching of the nose is not without its own dangers, especially the danger of driving infectious material into accessory cavities or into the Eustachian tube, or out of the nose into throat, stomach, etc.

In conclusion, Kayser admits that *symptomatic* treatment of the nose is to be commended in infectious (as in other) diseases, but denies that "pharyngotherapy" is at all supported either by experience or by theory.

Arthur J. Hutchison.

Knox, D. N.—*Actinomyces of the Cheek and Neck.* "Glasgow Med. Journ.," May, 1896.

THE patient, a young married woman, had been a farm servant up till the date of her marriage, and since then had frequently worked on a farm—milking, etc.

The disease first appeared as a slight swelling inside the left cheek, opposite the first molar. This was incised twice—once from inside the mouth and once from outside—and poulticed at intervals for five months, till the date of her admission to the Glasgow Royal Infirmary.

On admission, there was a large, rounded, firm swelling, about four inches in diameter, infiltrating the substance of the left cheek, extending downwards over the base of the jaw towards the chin and backwards to the lobe of the ear. The skin over it was a dark purple hue. There were no external openings, but numerous small tubercles all over the surface. The mass seemed firmly adherent to the lower jaw. The general health was good. Temperature, 98·2 morning and 99·8 evening. At first it was considered either malignant or syphilitic. A piece removed seemed to confirm the diagnosis of syphilis. Later on, the possibility of actinomyces was considered; but repeated searches in tissue scraped away failed to reveal the actinomyces, till an abscess formed and the organism was found in the pus.

Treatment was by repeated scraping with the sharp spoon, and, internally, iodine in potassium iodide, or large doses of the latter. In spite of this, however, the disease steadily progressed, and the patient died from exhaustion nine and a half months from the onset of her illness.

The changes that took place in the skin after each scraping were interesting: the red colour for the most part disappeared, and the skin became yellowish and leathery; the cavities and openings made by the spoon healed, and the surface became very irregular and tuberculated. This change was obviously of the nature

of a healing process: and there was, therefore, always a hope that the tendency to spread deeper into the neck might be checked thereby.

Arthur J. Hutchison.

Richey, S. O. (Washington).—*The Fads and Fashions of Surgery.* "Annals of Oph. and Otol.," April, 1896.

IN this paper the routine use of many operations is condemned. Most of these are operations which, a few years ago, were either unknown or only rarely performed, but which lately "have come into fashion."

Tonsilotomy is necessary in emergency, but should not be a routine practice; it removes redundant tissue, but leaves untouched the disease that will soon reproduce it. The cause of tonsillar hypertrophy is probably constitutional—abnormal digestive and metabolic processes, which will surely not be cured by removal of proliferated tissue. "Applications to the surface of the gland serve no purpose whatever, but by the use of proper agents in the crypts, injected gently or passed through the orifices on a cotton holder, the organ will gradually shrink, until the age of atrophy." The agents recommended are silver nitrate, to promote constructive metamorphosis; kali permanganate, to excite active oxidation; salicylic acid, to neutralize morbid and irritating deposits.

Excision and cautery of the hypertrophied turbinated bodies occurs more frequently than is justified.

The hypertrophy is often the first stage of an atrophy: the operation must, therefore, accentuate the final condition, and add a cicatrix which collects the secretions and causes increased and never-ending annoyance. A consideration of the anatomy and physiology of the nose shows that what is required is to reduce the calibre of the arteries in the "upper straight," thereby diminishing the influx of blood, removing their pressure on the sinuses, and thus permitting efflux of blood. This is to be done by applying, very gently, a four per cent. solution of cocaine to the upper meatus, to be followed by a two to ten per cent. solution of silver nitrate. The middle and lower meatus may be left alone, as their function is only drainage, and they soon come right of themselves.

Removal of adenoids is open to similar criticism. Often, if left alone, they do no harm and ultimately come right of themselves. Operation does not remove their cause, but may give rise to immediate severe ear disease, and leave the nasopharynx to become, not only far too large after the age of puberty, but covered with hard nodules, which collect secretion and cause constant irritation, or even ulceration.

Excision of the drum-membrane with the malleus and incus is justified by a suppurative process whose focus cannot be more simply reached, but for sclerotic catarrh it is to be condemned. It does not help at all to retard the disease; on the other hand, it removes from the delicate structures of the middle ear their natural covering and protection. Richey places his reliance "almost entirely upon vapour of iodine, with good, though not uniformly satisfactory, results." This rest of this paper is devoted to similar criticism of various operations on the eye.

Arthur J. Hutchison.

Texier.—*New Method of Administration of Bromide of Ethyl in Oto-Rhinology.* "Ann. des Mal. de l'Oreille," March, 1896.

IN order to avoid accidents we ought to attempt to obtain true anæsthesia as it is generally understood, but the transitory stage which precedes it produces paralysis of the cerebral hemisphere only. With chloroform there is only a short interval, but with bromide of ethyl this is prolonged. The same precautions as in general anæsthesia ought to be observed—the patient ought to be at once put into the position for operation, the best being situated on the knees of an assistant.

who places the limbs between his own, fixes the head with the right hand, and holds the hands with the left. The drug should be administered on a flannel mask. Five grammes of freshly-prepared bromide of ethyl are necessary for a child from three to eight, and five to ten grammes for children up to fifteen years of age. This dose ought not to be surpassed. This method is also characterized by an absence of the transition stage of coming out of the anæsthesia. As soon as the operation is over the child can expectorate himself without having to be told, and there are no after-symptoms. Lermoyez has pointed out that the time to cease the inhalation is when the pupils commence to dilate and the conjunctivæ are slightly injected. It is quite innocuous, and is suitable up to sixteen years of age: after which it is not a good anæsthetic, sleep being very difficult to obtain, and accompanied with a phase of excitation which often lasts for hours. It is only suitable for short operations, lasting thirty to sixty minutes, such as adenoids or large tonsils, aural polypi, and paracentesis of the tympanum. The cases in which it is absolutely contra-indicated are tubercular and congestive affections of the lungs, congenital and valvular affections of the heart, renal subjects, and to a less degree certain nervous conditions, taciturn subjects, depression, and children having fear of operation. Beyond these there is absolutely no contra-indication.

R. Norris Wolfenden.

LARYNX.

Billot.—*Analysis of Cases in which Tracheotomy Canulas have fallen into the Air Passages.* "Ann. des Mal. de l'Oreille," March, 1896.

THE author has collected nineteen cases which have occurred during twenty-six years, only one being in France, the others Russian, English, and American, which he explains by the assumption that the canulas in France are of more solid metal and more careful construction than elsewhere. A broken canula appears to fall generally into the right bronchus, like other foreign bodies. (Seven times in the right as against four in the left in the author's statistics.) The bronchi and trachea seem to have retained without excessive reaction tracheotomy canulas for times varying between one day and three years and three months. In cases of prolonged sojourn of the canula in the bronchi it is necessary in order to obtain free respiration that the canula should lie in the bronchus in a manner so as not to obstruct it, which seems to be the ordinary condition, and that there should be no other obstacle—small tracheal opening, vegetations, etc., which double the danger. If attempts at immediate extraction do not succeed, it is a capital point for the surgeon to examine how the patient breathes. If freely, he may temporize; if with difficulty, the tracheal opening should be enlarged and dilated, the simplest method being to introduce immediately a new and large canula.

In Razumowski's case the patient lived for three years with a canula in the bronchus and another in the neck. The author lost one case, which he attributes to the neglect of putting in a new canula. He does not agree with Sands' suggestion to seek the foreign body with the finger. A small probe, forceps, or metallic thread will give all the information possible. As to the choice of instruments, forceps and metal loops have given good results. A surgeon should have various different models at hand. He does not regard the suggestion of bronchotomy with favour, the canulas not descending lower than the first bronchial division, and it is also quite rare that attempts at extraction with forceps and wire loops have not eventually succeeded.

R. Norris Wolfenden.

Erselberg (Königsberg-in-Pr.).—*Resection and Suture of the Trachea.* "Deutsche Med. Woch.," No. 22, 1896.

THE patient, aged thirty-six, had cut his throat in an attempt at suicide nine months before; the trachea, which was divided, was united by sutures; these sutures had to be removed and a tracheotomy tube inserted on account of attacks of dyspnoea. It was found by the author that the tube could not be removed without inducing severe attacks of dyspnoea. The cause of this proved to be an obliteration of the lumen of the tube. The obliterated portion was resected, two centimetres of the trachea being removed, and the cut ends united by suture; the canula was removed four days later, and within a short time the patient quitted the hospital breathing and phonating normally. The author, whilst recommending resection, does not consider that the necessity for it should occur if proper primary or immediate treatment is adopted. *Michael.*

Hamilton, T. K. (Adelaide).—*Removal of a Foreign Body from the Bronchus.* "Australasian Med. Gazette," April 20, 1896.

A CHILD, aged about five years, commencing to cry while she had a bean (one of the seeds from the cone of the stone-pine) in her mouth, drew it down into the larynx. She was seen by a doctor almost immediately afterwards, but he could find nothing in the throat. If she cried the breathing became stridulous with much dyspnoea, and air did not enter the right lung at all freely.

When seen by the author two days later she was restless, there were occasional paroxysms of cough, the breathing was regular, and there was no stridor. A laryngoscopic examination under an anæsthetic failed to reveal anything of importance. On examining the chest, there was found to be complete absence of breath sounds over the right lung. Two days later, a low tracheotomy was performed, and a suture inserted in each side of the incision, through the trachea, to make the wound gape and keep it open. The child was then inverted, and the foreign body was coughed out through the opening. A rapid and uninterrupted recovery was afterwards made. *A. B. Kelly.*

Heryng, Theodor (Warsaw).—*On Sulpho-Ricinic Acid of Phenol, and its use in Tubercular and Chronic Diseases of Pharynx, Larynx, and Nose.* "Therapeut. Monats.," Mar. and May, 1896.

In the first of these papers Dr. Heryng gives a detailed account of the history of the discovery of sulpho-ricinic acid, one of the solvins; of the method of its preparation, of its properties, and of its introduction by Ruault into the realm of therapeutics. This is largely taken from Ruault's book, "Le Phenol Sulfuriciné dans la Tuberculose Laryngée." The second paper is devoted to the use of the drug in tuberculosis of the upper air passages, specially of the larynx. And a third paper is promised which is to deal with the application of the drug to chronic diseases of the upper air passages, viz., chronic hypertrophic coryza, rhinoscleroma, papilloma of the larynx, and syphilitic affections of the pharynx.

First Paper.—According to Robert the "solvins," among which sulpho-ricinic acid is classed, are the products of the action of concentrated sulphuric acid on triglycerides of the fatty acids or on the fatty acids themselves. There must therefore be a solvin corresponding to every oil, fat, and fatty acid. According to Benedict and Ulzer, concentrated sulphuric acid acting, in ice-cooled vessels, on fats produces the acid sulphuric ether corresponding to the fatty acid acted on, and the solvins are their neutral salts (mostly of ammonia). The solvins are thick, syrupy, bright yellow to brown fluids, decomposed at 95 to 110° C., and forming a vaseline-like mass at 0° C.

The most striking property of the solvins is their power of dissolving, or at least emulsifying, very many substances that are quite insoluble in water; for example, sulpho-ricinic acid dissolves forty to fifty per cent. phenol, ten per cent. β naphthol, fifteen per cent. salol or salicylic acid, etc., etc., and the solutions do not alter even after long standing. The phenol-sulpho-ricinate (for therapeutic use) must be quite clear, without the least turbidity, and must remain so at a temperature of 15° C. All preparations that are not quite transparent, dark brown, or that form a precipitate, must be thrown out as impure. They contain water, and, therefore, cause pain when applied to the mucous membrane. According to Müller-Jacobs, solvins penetrate animal and vegetable membranes with great ease; but Kobert and Kiwult have shown that that is true only of dead membranes.

To describe the method of preparation of sulpho-ricinic acid would be out of place here; the reader is, therefore, referred to the original article, or to Berlioz—"De l'Acide Sulfo-Ricinique," etc. (*Archiv. de Laryng.* 1889, p. 6).

Experiments on animals show, says Ruault, that sulpho-ricinic acid dare not be used internally or subcutaneously. On the other hand, it may be fearlessly applied to the mucous membrane of the nose, throat, and larynx.

Experiments on rabbits and guinea-pigs, introducing sulpho-ricinic acid into stomach, into pleural and peritoneal cavities, into subcutaneous tissue, and into crural vein, demonstrated the poisonous action of the drug. The animals rapidly died in convulsions. Microscopic examination showed destruction of the red blood corpuscles. The coefficient of toxicity was estimated by Berlioz at two hundred and twenty-seven milligrammes to one kilogramme weight of animal.

A forty per cent. phenol-sulpho-ricinate has no caustic action on the mucous membranes. It causes a slight burning sensation on the tongue and pharynx; indeed some people say it is painful, and this sensation may last, in very sensitive patients, for hours. This is more particularly the case when the part touched is the posterior wall of the larynx, that being the most moist part of the larynx; it must also be remembered that, normally, the pars arytenoidea is the most sensitive part of the larynx. Pharynx and tonsils react but slightly on painting with the phenol solution, and even in the nose a thirty per cent. solution causes only slight pain. It should be borne in mind, however, that there are exceptions, and, therefore, that it is wise to begin with a ten or twenty per cent. preparation, and in tuberculous patients even to use cocaine before the first application of the phenol.

Heryng has no unpleasant (toxic) effects to report. As to the unpleasant taste, while some recommend the addition of menthol and saccharin, others prefer to use the drug pure, letting the patients gradually get accustomed to it.

Second Paper.—This paper commences with a warning to all who may have to undertake local treatment of laryngeal conditions that not only skill, but great patience and the power of gaining the patient's confidence, are required. Further, that general as well as local treatment must be conscientiously carried out. Then the method of preparing cotton-wool laryngeal swabs of different shapes to suit different parts of the larynx are described, and the dangers of unskilled working in the larynx emphasized.

Phenol-sulpho-ricinate painted on to the mucous membrane of the mouth and pharynx produces a slight reddening. In the larynx this is more marked, but is only of short duration, and is soon followed by paleness of the surface. Where the mucosa is already hyperæmic the reaction is naturally more marked and lasts longer (according to Ruault, even twenty-four to forty-eight hours). Hence the rule—the stronger the reaction after painting with phenol (or, in the same way, the greater the pain) the less frequent must be the applications. Thus, some patients

can stand the application twice daily; others not more than twice weekly; while there are a few who cannot stand it at all. After being painted the mucosa takes on a whitish colour, which generally lasts about twenty-four hours. The sputa expectorated immediately after an application are tough, creamy, opaque, and white.

Ruault's directions for the use of phenol-sulpho-ricinate are as follows:—For tubercular erosion of the vocal cords and posterior laryngeal wall, gentle painting twice a week, or in more tolerant cases every second day, is sufficient. For the initial stage of circumscript tubercular infiltration of the epiglottis or vocal cords, first scarify freely; then, after bleeding has stopped, rub in the phenol with some force. If the infiltration is accompanied by ulceration and granulations, the latter are first to be removed with the curette. For the diffuse infiltrated form combined with ulceration, energetic rubbing with phenol is contra-indicated. Gentle painting is sufficient, or, if that has no effect, surgical treatment is called for. Tuberculosis of the epiglottis in its initial stage stands pretty energetic treatment with phenol. In widespread, rapidly breaking down deep ulcers, and only in this condition, Ruault finds an indication for surgical treatment of the epiglottis; but on this point Heryng differs from him.

The sclerotic, hyperplastic, and pachydermic forms must first undergo surgical treatment. Lastly, in miliary tuberculosis the prognosis is so hopeless that any treatment that increases pain or irritates the tissues must be completely laid aside.

Results.—Superficial tubercular ulcers, which are usually covered with greyish white matter, rapidly become clean, their edges fill out, and little red granulations sprout up all over. The purulent secretion becomes more mucous, less in quantity, and gradually disappears. Deep inflammatory ulcers with irregular edges become rapidly pale, and the swelling and granulations disappear in an astonishingly short time. Infiltrations and papillomatous growths rapidly diminish. Infiltrations and ulcerations of the ventricular bands often withstand all treatment, because they are part of the same affections of the ventricles. Here surgical treatment must prepare the way for treatment by phenol.

A peculiarity of the phenol treatment is that no cicatrices are to be seen on the surfaces after healing.

The so-called catarrhal form of laryngeal tuberculosis is the most rapidly healed (Ruault); next come circumscript periglottic infiltrations or ulcerations. The prognosis is distinctly worse whenever the epiglottis or the crico-arytenoid articulation is affected. A good prognosis may be given in cases of tubercular tumours, hypertrophic or papillomatous growths that have first been treated surgically. Other points affecting prognosis are heredity, constitution, age of patient, social position, and the condition of the alimentary tract. Treatment in hospital seems to Heryng unsatisfactory.

Of the mode of action Heryng offers no definite explanation.

This paper ends with an emphatic statement of the advantage, or rather necessity, of using only the Paris preparation of phenol-sulpho-ricinate, as in Heryng's experience other preparations had little therapeutic effect and caused severe pain.

A third paper, giving a more detailed account of Heryng's personal experiences with this drug in laryngeal tuberculosis, and its application to certain chronic diseases (*vide supra*), is to follow.

Arthur J. Hutchison.

Krebs, G. (Hildesheim). *The Treatment of Chronic Catarrh of the Pharynx and Larynx.* "Therapeutische Monat-hefte," June, 1896.

GREAT advances have recently been made in the treatment of these diseases, so that now, instead of being considered incurable, as was the case not long ago,

"the great majority can be cured." Each case must be treated on its own merits, the underlying cause or causes sought out, the stage the disease has reached and the anatomical changes it has produced carefully considered—the treatment varying accordingly. For example, in chlorotic patients with pharyngeal catarrh, treat first the chlorosis, omitting all local treatment till it is clear that the curing of the chlorosis has not also cured the throat condition. The same rule applies to primary scrofulous catarrh, except that in these cases the disease is seldom a catarrh of the pharynx and larynx, but rather a scrofulous rhinitis, or is due to the presence of adenoid vegetations. Again, patients with hemorrhoids or plethora abdominals (Rhiile) often suffer from chronic throat catarrhs. They must be treated at Karlsbad, Marienbad, Kissingen, etc., etc., before any local treatment is tried. Syphilitic catarrh of the throat does not exist, though syphilis of the throat (gummatous infiltrations) certainly does. In a syphilitic patient catarrh of the throat is a chance complication, but is a simple catarrh, although most text-books still describe syphilitic catarrh of the throat. The same remark applies to the pharyngitis sicca et albuminuria of diabetics and sufferers from Bright's disease. The dryness of the pharynx is not an isolated local condition, but is merely the result of the general want of water throughout the system. The author by no means wishes to deny that a true catarrh may occur in diabetes or Bright's disease. When it does occur it must be treated.

A second and more important (because more common) group of causes of chronic pharyngeal and laryngeal catarrh is constantly repeated mechanical and chemical irritation, the chief factors being alcohol, tobacco, and dust. Patients may be allowed moderate quantities of beer and light wines; one or two cigars a day. Cigarettes and chewing to be strictly forbidden. To prevent inhalation of dust, teach the patient to breathe through the nose, because scarcely anyone will take the trouble to wear a respirator constantly. Further, let them live as much in fresh air, especially forest-air, as possible.

The troubles arising from over-strain of the muscles, etc., of the throat are well known. Moderation in the use of the voice must be advised, correct methods of voice production taught, and the bad habit of coughing and hawking put down.

Of all etiological factors of chronic throat catarrhs the most important is disease of the nose. About fifty per cent. of these cases should be treated through the nose. The nose disease affects the throat in three ways:—

1. Stoppage of the nose removes the natural filter and moistener of air.
2. Secretions from the nose and its accessory cavities, when copious, flow naturally into the pharynx. When smaller in quantity they are drawn into the pharynx and partly swallowed, but partly they remain adhering to the pharyngeal and laryngeal walls. This, in the author's opinion, accounts for laryngitis and pharyngitis sicca vel atrophica and muco-purulenta, and at the same time indicates the correct treatment of these diseases. The same is true of naso-pharyngeal catarrh.
3. Direct mechanical disturbances are produced when the posterior parts of the nose are diseased.

Lastly, diseases of the lungs, etc., may also produce throat catarrhs. Thus, in three hundred and ten lung patients Schäffer found the larynx affected in three hundred and two.

Internal medication of idiopathic throat catarrh is of little use. Various spas are recommended by different doctors. Alkaline and alkaline-chloride springs, such as Ems, Vichy, etc., are the most generally recommended. Schmidt prefers the cold waters of Kissingen, Homburg, etc. All these waters, or pastilles prepared from them, lessen the tough mucus in the throat and so lessen the irritation. Again, sulphur waters are recommended, such as Weilbach or Neundorf;

whilst high-lying forest lands. Alpine valleys, and sea air all have their uses and advantages. For dryness Jurasz recommends iodide of potassium, and, when paresthesia is marked, bromides, valerian, arsenic, and the like are indicated.

The author then insists that far too little attention is paid to the psychical element in throat cases, and, consequently, in their treatment. That man will be most successful in treating chronic throat cases who, while employing correct treatment, can gain his patient's confidence in himself and his methods—who, in short, employs intentionally or unintentionally a certain amount of "suggestion."

(To be continued.)

Arthur J. Hutchison.

Manley, T. H. (New York).—*Cancer of the Larynx*. "Medical Times and Register," May 9, 1896.

REFERRING to a case of laryngeal ulceration, supposed to be malignant, where the larynx and three rings of the trachea had been removed, the patient dying three hours afterwards, the author sums up against such operative procedure in these cases, believing that it is generally fatal, gives little relief, and no certainty of eradicating the disease. On the other hand, he points out the great success of the operation of tracheotomy in relieving pain and prolonging life, which, combined with palliative treatment, he considers the only rational procedure.

StGeorge Reid.

E A R.

Bezold, F. (Munich).—*The Hearing Power in Cases of Bilateral Atresia of the Auditory Canal with Rudimentary Auricle*. "Arch. of Otol.," Vol. XXV., No. 2.

IN two cases examined by the writer there was diminished air conduction for low tones, marked "negative" Rinne, and increase of bone conduction for all forks. These results coincide with those obtained by others, and from the point of view of functional testing I realize the defect as in the conducting apparatus, and more suggestive of ankylosis of the stapes than of simple meatal obstruction. This is confirmed by the results of thirteen autopsies collated by Joel and three by Ranke.

Dundas Grant.

Bonnier.—*Variation of the Patellar Reflex in Certain Labyrinthine Affections*. "Semaine Med.," No. 3, Jan., 1896.

THE author notes an augmentation of the knee reflex in a large number of patients affected with marked labyrinthine insufficiency. He has seen diminution and even suppression in cases of auricular inflammation. The mode of appearance of these reflexes suggests that this direct action is in reality only the marked variation of an interference of a dynamogenic character.

Lacourret (Huggett).

Burnett, C. A. (Philadelphia).—*Chronic Tympanic Vertigo*. "Philad. Polycl.," May 2, 1896.

THE author believes that paroxysmal chronic tympanic vertigo is a late symptom of chronic catarrhal middle ear disease, being preceded by tinnitus and increasing deafness, and accompanied by failing health, leading to the true cause of the disease often being overlooked, and, when diagnosed, to be mistaken for internal ear rather than middle ear mischief. He reminds us of the symptoms present in palsy and cerebellar disease, not found in this; he points out that the chronic catarrh of the tympanum leads to a sclerotic change in the mucous membrane.

a retraction of the membrana tympani and the chain of ossicles, with impaction of the stapes in the fenestra ovalis; further, that the membrane of the fenestra rotunda being also thickened by the catarrhal process, and more or less immovable, the column of labyrinthine fluid is compressed and causes vertigo by irritation of the terminal fibres of the auditory nerves. He believes that the paroxysmal character of the vertigo is caused by variations in the degree of impaction of the stapes, due to changes in the atmosphere, catarrh of the naso-pharynx, failing health, etc. The author advises removal of the incus as the only efficient method of relieving the impaction of the stapes. *StGeorge Reid.*

Courtade.—*Mastoiditis, with Sero-Mucous Effusion; Evacuation by Compression in the Air of the Auditory Meatus.* "Ann. des Mal. de l'Oreille," Feb., 1896.

THE author relates two cases in detail, from which he draws the following conclusions. In certain acute suppurative median otitis the mastoid apophysis participates in the inflammatory process and is filled with sero-mucous liquid. This mastoiditis with effusion does not give rise to any general or local symptoms as marked as suppurative mastoiditis. Evacuation of the liquid may be successfully obtained in certain cases by simple compression of the air in the auditory meatus with Siegel's speculum. *R. Norris Wolfenden.*

Coyne, Cannien.—*The Histology of the Organ of Corti.* "Journ. d'Anat. et Phys.," May, June, 1895.

THE membrane of Corti consists of three portions: internal, middle, and external. It is made up of three superposed layers, which may be clearly made out in radial sections. The inferior and superior layers are narrow and dense. The middle layer is thicker and clear, and is traversed by fibrillæ. In a section cut perpendicularly to these fibrillæ, a reticulum forming polygonal spaces is made out. The partitions join at the angles of the network, and are thickened throughout the whole length of the line of junction.

The hairs and cellules of the organ of Corti are continued in the spaces. The membrane has two insertions: (1) internal, on the protuberance of Huschke; (2) external.

It is morphologically comparable to the cupula terminalis. The reticular membrane is considered by the authors to be the inferior layer of the membrana tectoria. *Lacoarret (Waggett).*

Danziger, Fritz (Beuthen, O.S.).—*On the Treatment and Causes of Unilateral Chronic Ear Catarrh.* "Therapeut. Monats.," June, 1896.

THIS paper deals with suppurative otitis media arising in connection with disease of the nose or naso-pharynx. Several cases are quoted in which obstinate otorrhœas that had resisted other treatment were easily cured, either by treating the nose or naso-pharynx alone, or by that combined with some simple treatment of the ear. The author concludes as follows:—(1) The otorrhœa is mostly unilateral because the nose or naso-pharynx is seldom affected equally on both sides. (2) The disease varies in intensity with every alteration in the region of the upper respiratory tract (colds, etc.). (3) Caries or widespread destruction of the petrous bone has never been observed by the author. (4) Hearing power is not so much affected as in otorrhœas from other causes—provided it is not left for years without suitable treatment. The prognosis is better than in almost any other ear disease, because, the throat and nose having been treated, the ear gets well almost of itself.

Arthur J. Hutchison.

Dench, E. B.—*Neoplasms of the Ear.* New York: Eye and Ear Infirmary Report, January, 1896.

THE author gives full details of several cases of new growth in and about the ear which have come under his observation during the past twelve months. They are five in all. (1) Sarcoma above the tragus. (2) Large exostosis. (3) Ulcerating papilloma. (4) Fibro-sarcoma of the middle ear. (5) Round-celled sarcoma of ear. The first three cases call for no comment, except that in the exostosis case it was necessary to throw forward the concha and meatus in order to attack it successfully. The fourth occurred in a man of sixty, who gave the following history. He had been totally deaf for eighteen months with the right ear, and had facial paralysis for twelve months and slight pain for a few weeks. A bright red growth was found occluding the meatus on that side, which readily bled. Examined further under ether the growth was found too extensive to remove through the meatus, so the external ear and meatus were thrown forward in the usual way, and as much as possible of the growth removed with a curette. A Stacke operation was now proceeded with, and much carious bone was subsequently removed, including the remains of the ossicles, together with more growth. The tegmen tympani was destroyed, and the dura involved. The patient made a good recovery, with material improvement in hearing and a marked lessening of the facial paralysis, and eight months after there was no return of the growth. The patient in case five was a boy of ten; the history was very unsatisfactory. He presented an extensive ulceration of the auricle, with exuberant granulations; he had already been under specific treatment with but slight result. There was general adenitis. The whole ear and part of the external meatus were removed, only the skin on the posterior surface of the auricle being saved; a large portion of the parotid gland was also removed, as were its posterior lobe and the affected cervical glands. The wound, which could not be entirely closed, healed by granulation; the patient made a good recovery, his health improving in a very satisfactory way. The external meatus, however, became occluded during cicatrization.

R. Lake.

Denker, A. (Hagen).—*A Case of Epithelioma of the Cartilaginous and Cutaneous Meatus and Auricle.* "Arch. of Otol," Vol. XXV., No. 2.

THIS commenced as a wart in the meatus, which recurred after removal, and after a year was thoroughly scraped away. Soon, however, the floor of the meatus became affected, and in spite of another clearance the greater portion of the meatus became filled with fungating granulations, and a nodule appeared on the antihelix, which microscopical examination proved to be epitheliomatous. The auricle and meatus were completely removed by means of the knife and sharp spoon, the healthy membrana tympani being left untouched. The large gap left was diminished by means of a sliding flap at the upper part, and the edges were brought together below, after being loosened by a liberating incision. The spaces left were covered by means of Thiersch's skin-grafts. Granulations which formed in the meatus looked suspicious, but were proved not to be malignant, and healing took place without narrowing of the passage.

Dundas Grant.

Hubbell, Alvin A. (Buffalo).—*Report of a Case of Otitic Brain Abscess, with Remarks on Diagnosis.* "Buffalo Med. Journ.," May, 1896.

A MAN, aged twenty, had complained for some time of headache, loss of appetite, and nausea. The left ear had discharged since he was six years of age. For three days he had had severe pain in the left ear and left side of the head. Upon examination a polypus was found nearly filling the left auditory canal, and there

was also a considerable offensive discharge from this ear. There was no swelling or tenderness over the mastoid.

On the following day the greater part of the polypus was removed. Two days later the meatus was somewhat swollen and painful, and the fetid discharge continued. The head symptoms had become more pronounced, and the patient seemed dull and restless. The pulse was sixty; respiration ten; temperature ninety-seven; and the pupils reacted slowly to light. An ice bag was applied to the side of the head and around the ear. The next day the pain in the head and ear was worse: opiates were prescribed. On the sixth day after admission he had a convulsion. On the seventh, another convulsion: pulse thirty-two, respiration four or five. Stimulants were freely given, and counter-irritation applied to back of neck. Vomiting. Delirium. On the eighth day, coma and death.

At the *post-mortem* examination the convexity of the brain showed signs of recent acute fibrinous lepto-meningitis. The same condition existed in a marked degree at the base. Moderately firm adhesion fixed the temporo-sphenoidal lobe on the left side to the upper border of the petrous portion of the temporal bone. Opposite the adhesion there was a cavity in the temporo-sphenoidal lobe as large as a walnut, lined by greyish necrotic tissue, and containing pus. This cavity was connected with the middle ear by two or three distinct openings through the roof of the latter.

The paper terminates with remarks on the frequency and diagnosis of cerebral abscess.

A. B. Kelly.

Mandelstamm.—*A Case of Acute Median Otitis with Mastoid Complications cured without Surgical Intervention.* "Ann. des Mal. de l'Oreille," March, 1896.

IN the author's case inflammation of the mastoid apophysis was already evident at the initial period of the inflammation of the tympanum before pus was formed. Pulsations of some point of the tympanic membrane, often observed at the commencement of an acute median otitis, do not always prove the existence of a perforation. Pulsation only indicates the spot where perforation is produced in case of spontaneous rupture of the membrane; it is due to hyperemia and pulsation of the vessels of the tympanum across a membrane relaxed by inflammation. In the author's case the pulsating spot corresponded exactly to an old cicatrix. Paracentesis must not be practised indiscriminately in all cases of acute inflammation of the tympanum. It is indicated always when rupture of the membrane is imminent, or where there are dangerous inflammatory symptoms or intense pain. It has a special indication in infants. At the commencement of acute median otitis it is essential before everything to remember the possibility of cure without surgical intervention. The same rule of conduct should be observed in acute inflammation of the mastoid apophysis. Too early intervention is as bad as waiting too long. The precise moment to interfere is an impossibility to lay down as a rule.

R. Norris Wolfenden.

Planat.—*Ménière's Symptoms in Young Subjects.* "Thèse de Lyon," 1894-5.

IN the first chapter the author rapidly details the principal features of Ménière's disease in the adult, and passes directly on to his theme. From the sixteen observations which form the subject of the second chapter it appears that, speaking generally, the malady may (1) be engrafted on to an infective condition (scarlatina, measles, typhoid, pneumonia); (2) be consecutive to head injuries; (3) or attack a subject in apparently good health.

He has met with several patients who had adenoids, coryza, or pharyngitis. The etiology of the disease is evident in the observations. As to the pathology

many difficulties arise. The rarity of Ménière's symptoms in children and young adolescents is to be explained by the presence of communication between the labyrinth and the cavities in its neighbourhood.

With regard to diagnosis, epilepsy in its many forms might lead to the belief that the malady with which we are dealing was present, and the same may be said of Friedrich's disease. Treatment should be the same as in the adult. Bromides and iodides are to be employed in conjunction with inflation by the Eustachian tube. Revulsives may be used at the same time.

Prognosis varies with the etiological course which gave rise to the trouble. It is very grave if the disease complicates an acute infectious condition, but good if it arises during health.

Lacoarret (Waggett).

Raugé, Paul.—*Otitis and Mastoiditis.* "Bull. Méd.," June 24, 1896.

THIS is a paper showing how the anatomical division of the middle ear into two cavities or sets of cavities, separated from each other incompletely by the aditus, has gradually been given up, till now the tympanum, aditus, and mastoid antrum and cells are regarded as forming one complicated cavity. Up till quite recent years the surgeon and the otologist in dealing with this cavity kept strictly to the region considered by each his proper sphere of action, the surgeon restricting his interference to a Wilde's incision (always without success) and an occasional trephining of the mastoid, which, however, never went farther than the antrum. On the other hand the otologist approached the cavity through the meatus, his most daring operations being curettement of the attic or removal of the ossicles. The aditus remained a neutral territory untouched by either operator. The change from this state of affairs was due to both surgeons and otologists attempting to get more thoroughly at the true source of the disease; they soon found that there could be no partition of the ground, but the whole group of cells, etc., had to be regarded and treated as one single diseased cavity. Only after this did any true knowledge of the processes of otorrhœa arise.

Mastoiditis is probably never primary, but always follows a tympanitis. Even those cases described by Lubet-Barbon at the Société Française d'Otologie et de Laryngologie, if carefully enquired into, will generally be found to have some history or marks pointing to a previous tympanitis.

The otologist or surgeon nowadays who undertakes the treatment of an otorrhœa of some standing considers the tympanum merely the entrance to deeper seated parts which he will almost invariably have to attack.

In many respects mastoid abscess and empyema of the antrum maxillare resemble each other. Till quite recently known only in their acute stage, or when they showed on the surface—therefore comparatively rare diseases—they now are known to be very common, and to be the causes of what previously were intractable diseases, viz., chronic purulent nasal discharge and chronic otorrhœa. And as the causes of these are similar, viz., disease of accessory cavities, so ought the treatment to be. There should be as little hesitation about exploring the mastoid in a case of chronic otorrhœa as there is about exploring the accessory cavities in a case of chronic purulent rhinitis.

Arthur J. Hutchison.

(This paper has already been noticed in the JOURNAL by DUNDAS GRANT.)

Scheibe, A. (Munich).—*A Contribution to the Diagnosis and Treatment of Cholesteatoma in Otitis Media Purulenta Chronica.* "Arch. of Otol.," Vol. XXV., No. 2.

THE author confirms Bezold's opinion that cholesteatoma does not occur in cases in which the perforation of the membrana tympani is central with free edges. On the other hand, he holds that it is always present if the perforation borders on the

wall of the aditus—in the postero-superior border—or if, being central, its margin is attached to the inner wall of the tympanum. In the central cases the extension of epidermization is ascertained by inspection: in the marginal ones the intra-tympanic syringe has to be used one or more times, for the extrusion of epidermic masses, the meatus being previously carefully cleaned.

Out of forty-five cases, thirty-eight were treated by direct injection and insufflation, eighteen being cured. Gompertz's results, showing thirty-six cures in forty-nine cases under this treatment, are quoted. In the absence of urgent symptoms, he urges the use of this treatment after the removal of granulations, and, only if the passage to the aditus be too narrow, of the malleus as well. Persistence of fœtor is considered an indication for resection of the posterior wall of the meatus. In case of urgent symptoms, Siebenmann's chiselling operation is advised. [The removal of the ossicles is not advocated, and probably should be absolutely avoided if there is preservation of any useful degree of heaving power in the ear.—ED.]

Dundas Grant.

Stern, L. (Metz).—*Contributions to the Bacteriology of Otitis Media Purulenta.* "Arch. of Otol," Vol. XXV., No. 2.

THE author, with Zaufal, finds no marked relation between certain bacteria and special forms of purulent median otitis. On the other hand, three different phases of the disease may be noted which have more or less definite bacteriological peculiarities, as follows:—(1) The primary or early acute phase, with profuse purulent non-fœtid discharge, in which cocci—*e.g.*, *staphylococcus pyogenes albus*—predominate; (2) the later phase, with profuse fœtid muco-purulent discharge, in which rods greatly surpass cocci in number; (3) the last, in which there is a scanty fœtid crusting or cheesy discharge, showing bacilli of all varieties and practically no cocci. In a few cases of otitis media purulenta phthisica tubercle bacilli were found. These investigations were confined to patients who had not been under treatment, and whose meatuses had not been contaminated with oil or other matter. The material was conveyed from the ear to sterilized water, by means of a sterilized wire, or occasionally, where the discharge was very scanty, the ear was filled with sterilized water. Cover glass preparations were made by means of a swab, one being stained with aniline water, gentian violet, or carbolic fuchsin, the other by Gram's method.

Dundas Grant.

Werhovsky, B. (St. Petersburg).—*Examination of the Duration of Hearing throughout the Musical Scale in Diseases of the Internal and Middle Ear.* "Arch. of Otol.," Vol. XXV., No. 2.

THESE investigations were carried on by means of nine tuning-forks: A_2 , A_1 , A , a , a^1 , a^2 , f^2 , c^1 , f sharp¹, all being used for air conduction, but A , a , and a^1 only for bone conduction, the highest and lowest being for obvious reasons unsuitable for that method of testing. The charts of percentage of hearing power for the various forks are given in twenty-seven cases, eleven of sclerosis of the middle ear, fourteen of pure nerve-deafness, and one each of traumatic rupture of the membrana tympani and of the combination of nerve deafness with the residua of suppurative otitis. This solid and laborious contribution (like that of Alderton's, formerly analyzed in the JOURNAL OF LARYNGOLOGY, Vol. IX. p. 295) is of the utmost value, and is encouraging inasmuch as it confirms, instead of upsetting, the views which we have helped to popularize. The diminution of hearing for low tones (raising of lower tone-limit) characteristic of disease of the conducting apparatus is well shown in cases in which the diagnosis is supported by all the other received signs. In nerve deafness the general rule for a gradual diminution of hearing for the higher tones, more marked as they rise in pitch, is well exemplified, but the fact that there are more frequent deviations from this rule than in that for obstructive

deafness is also well brought out. In the case of combined nerve deafness and residua of suppurative otitis, the curve inclining downwards at each end of the scale is most striking. In cases of sclerosis, increase of bone conduction for all three forks was generally found, and for the lower more than the higher; but in the severer cases this difference was increased, so that for the higher there was actually diminished bone conduction.

Diundas Grant.

REVIEWS.

Archives of Clinical Skiagraphy. No. 2, Vol. I. June, 1896. By SYDNEY ROWLAND, B.A. Rebman Publishing Company.

IN this number there are six skiagrams, each briefly explained. Thus, the first (Plate VII.) is a case of hypertrophic osteo-sclerosis of the fibula under Mr. Clutton, and after follows a short dissertation on the difference between bone sarcomata and bony hypertrophies; but we doubt whether in an ossifying sarcoma of a round bone there would be transparency in its central part, as here stated. This would probably only occur in medullary sarcomata. The next, a revolver bullet in the palm, shows the very structure of the bone. Plates IX. and X. are of a fractured femur, the fracture extending into the joint. Plates XI. and XII. are most interesting deformities of the hands and feet. Page 23 is occupied with answers to correspondents. We entirely endorse our previous high opinion of the work Mr. Rowland is doing, and look forward to continued success in future numbers.

Handbuch der Laryngologie und Rhinologie. Herausgegeben von Dr. PAUL HEYMANN, Privatdocent an der Universität Berlin. 1. Lieferung, I. Band. Wien: Holder, 1896. ("Manual of Laryngology and Rhinology." Edited by Dr. Paul Heymann. Part 1, Vol. I.)

THIS is the first part of an encyclopædic work on diseases of the throat and nose, the appearance of which has been awaited with interest by all laryngologists. When completed, in a little over a year, it will extend to three volumes, dealing with diseases of the larynx and trachea, the pharynx, and the nose respectively. In carrying out this work the editor has had the assistance of over forty colleagues, including most of the well-known laryngologists of Austria and Germany, as well as a few from other European countries. The purpose of the work is to bring together the results obtained by observers in all parts of the world, so as to present a complete review of the present position of our knowledge in regard to the diseases in question. The enormous increase in the literature of the subject within the last ten years has made it impossible for a single author to undertake such a task; hence the need to adopt the co-operative method.

The part before us contains a very interesting and readable review of the history of laryngology and rhinology by the editor, and the beginning of an exhaustive article on the anatomy of the larynx and trachea from the pen of Professor Zuckerkandl. If the promise of this first number

be fulfilled in those which follow, as we are sure it will, the "*Handbuch der Laryngologie*" will become indispensable to all public medical libraries, and will be found on the bookshelves of everyone engaged in special throat practice.

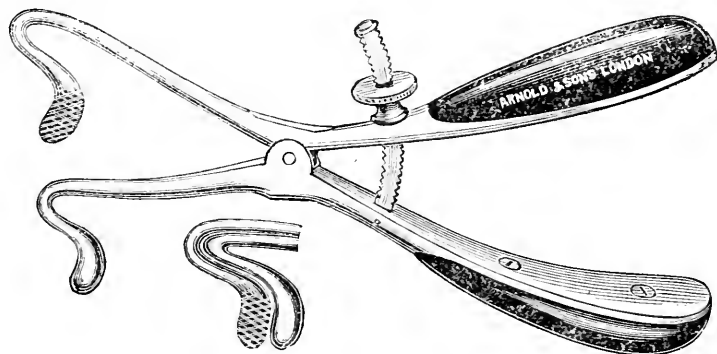
Middlemass Hunt.

IN the first volume, or rather first part, of the above book, one finds, not only a complete bibliographical index, but in that form which seems most appreciated by the reading members of our profession. It is, therefore, with considerable regret that we learn that the editor of this book has laid down on his assisting authors as a condition that the future bibliographies shall be complete and *chronological*. Now, when a journal for the sake of its subscribers publishes a periodical biographical index, it imparts no stamp of merit on any one individual work, as it tries to cover the entire range of *current* literature. But not only will it obviously necessitate either a colossal book to contain a complete index, or, if this bibliography is incomplete, each article noted is of necessity stamped with the seal of merit, and thus much that is worthless will receive that stamp. We trust that English authors will consider carefully whether such work becomes a book, however useful in the index medicus.

NEW INSTRUMENTS.

IMPROVED MOUTH GAG.

THIS gag is the invention of Mr. W. R. Ackland, Dental Surgeon to the Royal Infirmary, Bristol, who has very neatly and cleverly solved the question of how to reduce the bulk of the tooth-plate of the gag.



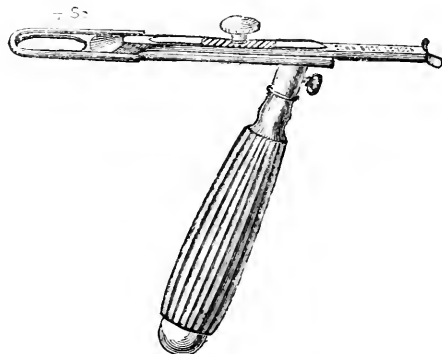
This is accomplished by causing the tooth-plates to lie in the same plane when the instrument is ready for insertion, or, in other words, edge to edge, not face to face. The obvious advantage of this is that the gag is much more easily introduced between the teeth than the old pattern.

This instrument is made by Messrs. Arnold and Sons, West Smithfield, London.

TONSILLOTOME.

Messrs. Down Brothers have made a tonsillotome to a new pattern for Dr. W. H. Kelson, of London, which, while somewhat resembling Mackenzie's, differs from it in the following particulars :—

1. The blade is considerably shorter. Having measured the distance



from the lips to the posterior border of the tonsil in a large number of cases, he found that this reduction could be made, and yet the most deeply placed tonsil reached with ease.

2. The handle blocks into the blade instead of screwing in; it, therefore, cannot possibly rotate, as sometimes happens with the screw at the critical moment.

3. The handle makes an acute instead of an obtuse angle with the blade, whereby the operator's thumb has much greater power in thrusting home the latter.

4. The instrument is entirely of metal.

The instrument seems to do its work very satisfactorily.

BOOKS, ETC., RECEIVED.

SCHRÖTTER, Prof. Dr. L. *Vorlesungen über die Krankheiten der Luftröhre.* Wien und Leipzig: Wilhelm Braumüller. 1896.

HEYMANN, PAUL. *Handbuch der Laryngologie und Rhinologie.* 4to. 1 Lieferung. Wien: Alfred Hölder. 1896.

PAGET, STEPHEN. *The Surgery of the Chest.* Bristol: John Wright & Co.; London: Simpkin, Marshall, Hamilton, Kent, & Co. 1896. Price, 10s. 6d. net.

CLARKSON, A. *A Text-Book of Histology Descriptive and Practical, for the Use of Students.* Bristol: John Wright & Co.; London: Simpkin, Marshall, Hamilton, Kent, & Co. 1896.

Bulletin de la Société Belge d'Otologie et de Laryngologie, No. 2. Bruxelles: Ch. Bulens, Imprimeur-Editeur, Rue de l'Escalier, 22.

BONNIER. (II.) *L'Oreille: Physiologie, Physio-genie, et Mechanisme.* (III.) *L'Oreille: Physiologie—Les Fonctions.* Librairie Masson & Cie., Editeurs Boulevard Saint Germain 30, à Paris

THE
JOURNAL OF LARYNGOLOGY,
RHINOLOGY, AND OTOTOLOGY.

Original Articles are accepted by the Editors of this Journal on the condition that they have not previously been published elsewhere.

Twenty-five reprints are allowed each author. If more are required it is requested that this be stated when the article is first forwarded to this Journal. Such extra reprints will be charged to the author.

The Editors are not responsible for opinions expressed in original Articles or Abstracts in this Journal.

Editorial Communications are to be addressed to "Editors of JOURNAL OF LARYNGOLOGY, care of Rehnman Publishing Company, Limited, 11, Adam Street, Strand, London, W.C."

TURBINOTOMY IN NASAL STENOSIS.
ANALYSIS OF 66 CASES.

By PETER ABERCROMBIE, M.D. (Glasgow).

Late Assistant Registrar Central London Throat and Ear Hospital.

ALL the 66 patients, whose cases were investigated, were operated on by Mr. Carmalt Jones, at the Central London Throat, Nose, and Ear Hospital, by means of his own special instrument, the "spokeshave" or turbinotome. It is not necessary to describe the operation itself, or the instrument used, as this has already been done more than once of late years.

Out of the 66 cases, relief was afforded by the operation of turbinotomy in 62: that is, in almost 94 per cent. of the cases the operation was successful in a greater or less degree. Only 4 cases of the 66 were not benefited by the operation, *i.e.*, a percentage of little over 6.

On the other hand, of the 62 successful cases, the relief afforded by the operation was very marked in 21 instances, and especially so in 4 of these. In 14 cases, decided improvement followed the operation; and in 27 patients the operation gave slight relief only.

As regards sex, 41 males were operated on, and 25 females.

The oldest patient was 71, on whom the result was most satisfactory.

The youngest was a little girl aged 6 years, where slight relief was afforded by the operation. But the large majority of the patients were young adults.

In practically all the cases, the nasal stenosis was the result of hypertrophic rhinitis to a greater or less extent. Over and above this condition, in 8 cases there were septal spurs: in 3, a deviated septum existed; in 10 cases, nasal polypi were present: in 7, enlarged tonsils and adenoids; chronic dry median otitis in 8 cases: adenoids alone in 4 cases; and in 6 cases there was chronic suppurative disease of the middle ear.

Most of the patients complained of the nose being "blocked" or "stopped up;" although a few in whom nasal stenosis was distinctly present did not seem to suffer very much inconvenience from it.

In most of the cases, mouth breathing was a prominent feature, and the effects of such an abnormal state of matters were very common and well marked in the majority of instances. Fourteen patients made complaints as to hearing. Dryness of the throat was extremely common as a result of the nasal stenosis necessitating oral respiration.

In 17 cases, one side only was operated on; in the remaining 49 both sides were spokeshaved. Turbinotomy alone was performed in most of the cases; but in a few, enlarged tonsils were removed as well or adenoids scraped in addition to turbinotomy, or both the above and turbinotomy. In most of the nasal polypi cases, in addition to the spokeshave, the forceps or snare was used; but the spokeshave was found useful in clearing the nostril of polypi in several cases.

As regards the use of anæsthetics in the operation: in 5 cases, nitrous oxide gas was administered, and was found to be quite effective, no pain being felt by the patient during the few seconds occupied by the operation.

In 31 cases, a ten per cent. watery solution of hydrochlorate of cocaine was applied locally in cotton wool plugs for a few minutes before the operation. But, in spite of this, pain was felt in every case, more or less; and in not a few of them great pain, indeed, was complained of.

In the remaining 30 cases, no anæsthetic, general or local, was used at all, and the pain was described as great, though momentary. Most of the patients describe the operation as being "very painful," "acutely painful," etc., even those who had cocaine applied. But a few do not seem to regard the operation as a very painful proceeding.

The bleeding, in every case without exception, was pretty profuse, but in no case was there alarming hæmorrhage at the time of operation. More or less bleeding occurred from the nose for several days afterwards in most of the cases.

In one man secondary hæmorrhage occurred 14 days after the operation; so much so, indeed, that he went to hospital, where he remained for two weeks.

Most of the patients operated on returned to their homes on the day of the operation: some of them on foot. In only one case (a very anæmic girl) did the patient actually faint after the operation, though many felt "faintish" after it.

A good many of the patients stayed in bed for a few days afterwards, or at any rate within doors. But not a few were not confined to bed or even the house at all. Several returned to work the following day. After-headache, more or less severe, and chiefly frontal, was present in most of the cases. In very few instances, indeed, were there any unfavourable symptoms following the operation, and in those few nothing alarming occurred.

Slight swelling about the nose and eyes was not very uncommon for a few days. In no case, so far as I can judge from patients' letters, has atrophic rhinitis resulted from the operation. As regards after treatment,

in all the cases cotton-wool plugs were packed up the nostrils to arrest hæmorrhage. An antiseptic lotion, to which tannic acid was sometimes added, was prescribed for most of the patients. Some were ordered unguentum acidi borici to apply up the nostrils : and for the headache so commonly following the operation, and often complained of so bitterly, potassium bromide was usually prescribed. As a rule, for a week or so before operating the patient was directed to use an alkaline and antiseptic nasal lotion, as a preparatory cleansing agent.

In 2 cases, some time after the operation, and presumably resulting from it, a condition of pharyngitis sicca was observed. But in both of these cases the patients admitted that even with that they were more comfortable than before the operation with their noses blocked up.

Mr. Wingrave, in his microscopical examination of over 200 turbinals removed by the spokeshave, came across a few in which there were distinct evidences of atrophic changes present : so that it is possible the 2 cases referred to above may have been cases of atrophic rhinitis in an early stage, and not cases where the operation of turbinotomy led to atrophic mischief. This latter is one of the drawbacks stated by some against the operation.

In no case examined after the operation has any trouble arisen from the opening up of the hiatus maxillaris, which latter, no doubt, may happen in some cases.

No external nasal deformity has been seen to result from the operation in a single case ; rather the reverse, indeed, occurs. The nostrils, being stimulated by the passage of air through them, become more active and patent, with the result that the nose becomes larger, and instead of being a small, deformed, and more or less useless organ, it becomes of a good size and shape, and has its function restored.

After turbinotomy, a reproduction to a greater or less extent of the inferior turbinal mucous membrane may take place, and this was observed in several of the cases. More especially so was this in one patient, where a small piece of the new turbinal, so to speak, was removed and microscopically examined by Mr. Wingrave, who found it to consist of perfectly healthy and normal mucous membrane. "complete in its details," and with no appearances either of atrophy or hypertrophy. This reproduction of tissue may go still further, and result in a kind of fungoid mass. In one case, such a mass had to be removed with the snare ; in other 2 it required reduction with the galvanic cautery.

The immediate effect of turbinotomy is to obtain a free passage of air through the nostrils, and many of the patients remarked on the great comfort this alone was to them after enduring a period of nasal stenosis with all its miseries.

As regards the remote results of the operation, the patient breathes easily through the nose in a natural fashion, instead of through the mouth as he did before : there is less strain put on the respiratory muscles, the diaphragm and intercostals especially ; aëration of the blood is better carried out ; and the nose becomes larger, more useful, and also more shapely by having one of its functions properly restored.

In several cases ear symptoms, and especially tinnitus, were relieved

by turbinotomy. Some time after spokeshaving, in some of the patients, an appearance like atrophy was to be seen on examination, but with no fœtor, no crusts, and no difficulty in breathing.

On the whole, in suitable cases, turbinotomy is a most successful operation; and judging from results obtained so far, is not only a justifiable proceeding, but a highly desirable one in many instances.

SOCIETIES' MEETINGS.

THE BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION.

Ordinary Meeting, July 17th, 1896.

Dr. GEORGE STOKER, *President, in the Chair.*

Dr. ROBERT H. WOODS (Dublin) showed a *Carcinomatous Larynx*, which he had extirpated from a man at sixty-five.

The symptoms began ten months previously with hoarseness, which progressed to aphonia. He had lately begun to suffer when swallowing and to be troubled with dyspnœa.

The right side of the larynx was occupied by a fungating and ulcerated mass of cancer, which crossed the middle line, both in front and behind, and extended from the epiglottis above to the true vocal cord below. An enlarged lymphatic gland under the right sterno-mastoid was also removed.

The wound was closed by Solis-Cohen's method, the anterior wall of the œsophagus being sutured to the skin in front so as to cut off the trachea from the mouth. No tracheotomy tube was inserted.

The patient did very well for a fortnight, his temperature never exceeding 99° F., but he then developed purulent bronchitis, and died on the twentieth day after operation.

Mr. WOODS also showed a *Speculum devised for the purpose of Facilitating Examination of the Post-Nasal Space in Difficult Cases.*

The apparatus consisted of a Gutsch's mouth speculum, into the front of which a pane of glass was fitted, thus preventing the patient from breathing through the mouth and compelling him to breathe through the nose, thus relaxing the soft palate. The tongue was at the same time kept down by the blade intended for that purpose in the original instrument. Thus both the nose and the mouth were necessarily open to the throat, when by putting the post-rhinal mirror into position (the stem lying between the lips and the speculum) the post-nasal space could easily be examined. The glass pane was placed at a slight angle, on the same principle as the glass in Siegel's ear speculum, and for the same purpose, *i.e.*, so that the

light from the forehead mirror should not be reflected directly back to the eye. The instrument is made by Messrs. Mayer & Meltzer.

Dr. DUNDAS GRANT: It is a most ingenious application of a physiological principle. It seems to me that this speculum will be of great advantage in the case of those patients with whom we have difficulty in posterior rhinoscopy. I should like to know what results Dr. Woods has had in practice with it, because some patients are so very irritable that they would be apt to cough out the mirror and the speculum as well.

Dr. SCATLIFF: My experience in regard to the mouth speculum is that patients retain it generally without any trouble. I have not had an opportunity of trying this modification.

The PRESIDENT: I am sure if Dr. Woods can provide us with a simple and easy method of making posterior rhinoscopic examinations, he will have conferred a benefit upon the profession. In my experience it is an extremely troublesome procedure.

Dr. R. H. WOODS: I have not had an opportunity of testing the speculum in a great number of cases, because after I had it made I thought it would be an additional advantage if the tongue plate could be hinged so as to depress the tongue to different degrees. I accordingly gave it to an instrument maker, whom I could not get to grasp the idea; and the result was that after repeated trials, extending over a couple of months, he only succeeded in doing everything that I told him not to do. I really have only tested it in a case or two, but so far as my testing went the instrument answered remarkably well. I must admit that I have not had the opportunity of trying it on one of those for whose use it is specially intended, and that is the reason why I should like the Association to try it. I think the instrument ought to be made in several sizes so as to fit different mouths, and also that the tongue plate should be made of bendable material, so that it might, if necessary, be accommodated to each patient without running the risk of breaking it after prolonged use.

Mr. G. C. WILKIN. *A Case of Sarcoma of the Vestibule.*

This patient, a woman twenty-seven years old, came to me last November. She had then a large polyp, filling almost the whole of the right vestibule and growing from its floor, bleeding very readily when touched. She complained of no pain at all, but it was an inconvenience to her, both as to its bleeding and as to its obstruction. I had the advantage of our President's opinion, as he was fortunately present when the case came in, and with his approval I was about to remove it. We found, however, that it bled so very readily that we considered it better not to do so until the patient could be admitted. I subsequently removed the growth, chiefly for microscopical examination, simply using nasal forceps, and I took it as completely away as I could. I plugged firmly with carbolic wool; there was very little hæmorrhage after the removal. I did not expect to entirely cure the case by this removal, but when the plugs were taken out two days afterwards, absolutely no thickening was visible. There was just a mark where the growth had been, but no

thickening and no hardness on the floor at all. Seeing this to be the case, I discharged the patient. The pathological report, which was received two weeks later, was to the effect that the case was undoubtedly one of sarcoma. I wrote immediately to the husband of the woman, and arranged to meet him at the hospital. I told him as much as I could about the risk of any recurrence, and asked him to allow me to see the patient once every three months. This I have done, and to-day there is, as you have seen, absolutely no sign of any recurrence. There is some myxomatous tissue about the middle turbinate, but that had nothing to do with the case. The patient refuses treatment for her nasal trouble, the breathing being now quite free. I should like to know the opinion of the Fellows on these cases, as to whether they are really sarcomatous or simply simulate sarcomata microscopically.

I may say that the only injury the patient admitted was that six weeks before being seen she scratched the floor of the vestibule with her finger nails: previously to that no growth was present.

Dr. B. J. BARON. *Abscess of the Frontal Sinus.*

The patient is a man aged fifty-nine years. He consulted me early last year, and gave the history that seven years before he had taken cold, had a persistent discharge from the nose, with blockage of both nostrils, especially the left, and a certain amount of pain over the left eyebrow, with swelling at its inner side, just at the root of the nose. On examination I found a good deal of polypus growth in both nostrils, especially the left side. On feeling around the swelling, which was elastic and evidently due to fluid, one found the bone over the brow to be somewhat thickened. There was also a fetid discharge from the nose. I removed the whole of the growth from the nose, and hoped to get the sinus drained in that way. This I could not do, for although the nose was quite clear, still the discharge went on and the swelling was persistent. Fearing the man might get into serious trouble, I suggested operation, which was performed, but not by myself. It consisted in making an incision over the inner half of the brow. A hole about the size of a sixpence, due to necrosis of the bone, was found underneath the incision. There was no polypus growth in the frontal sinus. A drainage tube was inserted into the left frontal sinus and also into the right, there being communication between them and pus in both. The operation was performed fifteen months ago, and you see the condition to-day. There is a constant dribbling of pus from the drainage tube, and a certain amount also drains into the nose. I have used various antiseptic solutions, and iodoform and boracic acid, etc., blown in through the small drainage tube, but all to no purpose, and as far as I can see this frontal sinus is never going to heal. One learns more by one's failures than by one's successes, and I believe the whole point of operation has been missed, because no attempt has been made to get drainage into the nose by enlarging the natural passages into the nose.

The patient refuses any further interference, and I bring him here to show a failure, and at the same time to ask men who are more experienced than I am, if anything further can be done short of another operation. I

know our President will recommend oxygen, and I shall be very pleased to learn the method, and to carry it out to the best of my ability. It has not been tried, but various other substances that are oxidizing agents have been used.

Dr. STOKER. *Case of Frontal Sinus Disease treated by Oxygen.*

The patient whom I show, a man, for nine years has had undoubted disease of the frontal sinus, with great pain and profuse discharge of pus from both nostrils, which stopped. Some months ago he developed nasal polypi in both nostrils. These were removed, and the usual cauterization practised afterwards, but although his nose was perfectly clear of polypi this profuse discharge still continued, and the pain over the frontal sinus still existed. Some two months ago he began to inhale oxygen in the usual way, viz., by means of a tube, the inhalations being taken three hours a day, not continuously, but intermittently, and now at the end of two months the pain has completely disappeared from the frontal sinus, and the discharge is nothing at all like it was. He tells me that there is a rather profuse discharge on rising in the morning, but once that has cleared out he has very little discharge during the day. I do not want to take any advantage of my position, but to mention this point in reference to the treatment. It was suggested that this treatment could not possibly do any good, because it was certain that there was a condition of polypoid growth in the frontal sinus. I, therefore, obtained a case of aural polypi, which is perhaps of more solid construction than the nasal polypi. I treated this aural polypi with the view of seeing the effect of oxygen. In the right ear on the sixth or seventh day the polypus shrivelled and came out after syringing, and now after seventeen days' treatment that in the left ear has quite diminished to small size and is rapidly disappearing; there is no discharge now from the left, and very little from the right.

Mr. LENNOX BROWNE: It is very difficult to speak on these cases. As regards Dr. Baron's case, I think most of the Fellows will be in absolute agreement with him that the failure was in not making a free passage from the frontal sinus into the nose in the first instance. This is a *sine qua non* in such cases, and I think if some of us would recognize more the importance of the enlargement of a small normal infundibulum, or the reopening of one obstructed by disease, we should find that the operation would be much more satisfactory. As to the future, there is nothing to do if the patient refuses operation. I do not see how oxygen is going to do any good, for if there is no passage it won't reach the seat of the mischief, and without free ventilation no satisfactory inhalation or irrigation is possible.

As regards Dr. Stoker's case, you are quite aware, sir, that there is a weak point in it. No one can be sure that there was a frontal disease at all, for unless you have opened into the frontal sinus I do not know how anyone can be perfectly certain that there is frontal disease. Nothing is more deceptive than the symptoms of disease of these accessory sinuses, and however the books may lay down certain hard-and-fast lines of diagnosis, we are constantly being surprised to find our diagnosis is contradicted when the supposed site is laid bare

That has been my experience at least. Nor do I admit that necessarily a frontal sinus has myxomatous tissue within it. I have seen many cases where there was no myxomatous tissue, and this condition is simply a product of chronicity. I admit that oxygen inhalations are of great value in nasal disease and disease of the accessory cavities. Although I have not cured any cases by oxygen, I willingly concede that I have used it with considerable advantage. Certainly one case, a young lady from New Zealand, who has been for many years suffering with ethmoidal disease, has gained enormous benefit by the persistent use of oxygen. Another patient, also with ethmoidal and frontal disease, has also gained very considerable improvement. I cannot say they are cured, but I do say that both patients have been encouraged by its results, while under my observation, to purchase a bag for the purpose of continuing the treatment, while I have received very hopeful and grateful reports from them as to their improvement. That is something for us to know, because if the inventor says he has a "cure" in a certain remedy, and those who follow him find that they have good results, I think that it is as much as the inventor can hope for.

DR. DUNDAS GRANT: There is one means at our disposal by which Dr. Baron might at all events fish for the passage into the nose; that is, by putting in a Eustachian catheter from the opening which has been made into the frontal sinus, feeling with it for the infundibular depression, and then passing through it a long pewter wire. From the direction given to the pewter wire as it passes through the open extremity of the Eustachian catheter, it is quite on the cards that it will make its way down into the nose without there being any danger whatever, as I have found in more than one case. After introducing the pewter wire, an india-rubber drainage tube should be pulled through by means of it. As regards the application of oxygen, the facility for it is the most perfect one possible, because the patient has only to attach the tube of the oxygen bag to the drainage tube in the sinus to give the oxygen the fullest possible play.

I should be delighted to see a good result follow the treatment by oxygen, though I have my doubts as to whether it would be possible to obtain it in such a cavity as the frontal sinus. Of course, operations like Luc's, which would result in obliteration of the sinus, would mean removal of the whole of the floor of the frontal sinus and of the anterior wall, so as to allow the skin of the forehead to sink in and cicatrization to take place. Cures have resulted from this. The deformity is not very great, but it is certainly to be considered.

DR. MILLIGAN: My experience in operations for frontal sinus disease is that unless a fairly large opening is made from the sinus into the nasal passage and maintained, patent retention of secretion and chronicity is induced. In order to secure complete arrest of suppuration, the main requirement from the first is free drainage. In connection with this subject I should very much like to have the advice of some of the Fellows present upon a case I have under treatment at the present moment. The patient was operated upon a few days ago for left-sided frontal sinus disease. The incision made was a vertical one in the centre line of the

forehead, and when the sinus was opened a large quantity of pus was found. The infundibulum was dilated, and a large drainage tube passed into the nose. In order, as far as possible, to avoid subsequent deformity, it has occurred to me that it might be worth while to pass a rubber tube, dilated at its upper end, into the infundibulum, and draw it down into the nose until the dilated end is held fast by the infundibular walls, and then to close the external wound entirely, all syringing, etc., being conducted through the end of the rubber tube projecting into the nostril. I should be glad to know if any of the Fellows have tried any such method of treatment, and, if so, what their experience has been.

Dr. DUNDAS GRANT asked Dr. Baron whether he had made use of Lichtwitz's or Hartmann's tube for inserting through the middle meatus up to the infundibulum. He himself had found them quite practicable for washing out the frontal sinus.

Dr. BARON said he had not used either of these tubes.

Dr. HILL: I think all would have gone well with this case if Luc's operation had been employed, and a very big opening made into the sinus. Irrigation is readily carried out if this be done, and the wound closes up. I have tried the other methods, which are very unsatisfactory. I have had to open the wound two or three times, and use instruments which were very difficult of manipulation. A big hole must be made, or it will close up.

The PRESIDENT: I would first of all distinctly suggest to Dr. Baron the use of oxygen. I should be very happy if he will allow me to undertake the treatment of the case with oxygen, which, like everything else, one has to know how to use, and I have had a good deal of its experience now. The oxygen should of course be passed in through the tube. No other opening is at present necessary.

Dr. BARON: The discussion unfortunately leaves me very much in the same position as I was before. I will certainly try oxygen, but operation the patient entirely refuses. As Dr. Hill and others have said, it appears to me that the whole of the matter lies in this—a wrong operation has been performed, and unless the proper one is even now done, cure cannot take place. It is a good lesson for us. I will try what Dr. Grant has suggested, though I do not feel very sanguine about the result.

The PRESIDENT: With regard to Mr. Browne's observations as to whether this is a case of frontal sinus disease, there is, of course, some truth in what he has said. The patient had all the symptoms which ordinary mortals like myself are led to regard as being indicative of disease of the frontal sinus, and had it not been so I should not have tried to treat the frontal sinus. The question is not what the disease is, but where it is. I may be wrong, but the man is better; pain has absolutely disappeared, and the discharge nearly so. For nine years that man has had this constant pain over the frontal sinus, accompanied with very profuse discharge. The discharge has lessened, and, therefore, I am encouraged to go on. With regard to oxidizing agents, I want to say that such are not at all in the position of oxygen. It is like employing the agent of a firm to carry out the work that should be done by the

principal. You may use peroxide of hydrogen, but it is only in contact with the diseased surface for a few seconds, which is absolutely useless, and it is very irritative. The whole essence of the oxygen treatment is the continuous exposure for a longer or shorter period, especially the longer period, to the diseased part. I recommend Dr. Baron to employ oxygen for three hours daily, with intervals of three-quarters of an hour; less than this is no good at all.

Dr. HILL. *A Case of Ulceration of the Pharynx and Larynx of Undetermined Nature.*

This patient, a male, aged forty, came to me two days ago with ulceration of the soft palate, a swollen condition of his epiglottis and arytenoid regions, and with some ulceration of the latter. He gave a history that he employed a telephone a good deal, and he had regularly used it after a person who had been affected with tuberculosis. The case is shown simply for diagnosis. What is this laryngitis due to? I have had a bacteriological examination made, but I have not yet received the report.

MR. LENNOX BROWNE: I am placed in just the same difficulty that I have been with other cases. I want my friend Dr. Hill to tell me how many days that man had his throat bad before he presented himself. I want to know what his family history is. How many weeks had he been ill? (Dr. HILL: Several weeks.) I think it is all very well, and very likely exceedingly valuable, to bring a patient here and to say, "What is your diagnosis from looking at the patient?" But I say that is not the way to make a diagnosis "up to date." Here is a man with an œdematous uvula, and I am told that he had ulcerations two or three days ago, which he has not to-day. I venture to think that is not characteristic of tubercle. I should like to know whether the tubercle bacillus is in the secretions of the patient's throat. It would be much better to bring a diagnosis as complete as possible, and not to bring it simply for objective eye inspection—a sort of fishing inquiry. I am not able to say that that case is one of tuberculosis of the pharynx or of the larynx. I see nothing in the throat that is not consistent with a condition commonly seen in a man who has over-indulged in alcohol, and has thereby become receptive to a catarrhal inflammation with a possibly added insanitary infection. During the recent hot weather I have seen patients under insanitary conditions who have become overheated and taken cold by a draught of cold air catching them. I do not say that the case may not turn out to be a case of tuberculosis of the pharynx, but at present I do not see that it had any definite characteristics to justify the conclusion without much more exhaustive methods of examination than have been employed.

MR. R. LAKE: In regard to Dr. Hill's case, I must say that looking at the small patches on the left anterior pillar of the fauces, they resemble extremely a condition met with in tuberculosis of the larynx. Although it is probably not true tuberculosis of the part, it is one of the preliminary stages of tuberculosis. I think if the bacteriological examination proves that the man has tuberculosis of his lungs, it would be interesting to see if by examining some of the matter from these superficial abscesses there are any tubercle bacilli there.

Dr. PEGLER. *Acute Otitis Media Hæmorrhagica.*

Dr. PEGLER : I may, perhaps, be allowed to remind you that this term was first employed by St. John Roosa in his treatise on " Diseases of the Ear." Two cases are described by this author, one of which commenced with pain and hæmorrhage and terminated favourably, without suppuration, precisely like the one about to be described.

McBride published four cases in a paper under the same title in the "Arch. of Otol.," 1885. One of these occurred in a gentleman who, whilst in a caisson, unwittingly rarefied the air in his tympanum by swallowing, when he should have performed the Valsalvan experiment. A blood clot surrounded by serum collected in the tympanum subsequently. This fact confirmed McBride in his belief that the hæmorrhage in these cases is due to rupture of the distended tympanic arterioles consequent upon the partial vacuum created in the middle ear by obstruction of the Eustachian tube, especially when the drum membrane has been rendered thick and unyielding by previous disease.

Barr records an instance ("B. M. J.," April 28, 1888) occurring in an infant of nine months and a half. The only explanation apparent seemed to be a hæmorrhagic tendency, due to some weakness in the vessel walls.

William Hill described his own personal experience of the disease at the Bristol Meeting of the British Medical Association, and spoke of it as an acute sero-sanguinolent otitis media. Paracentesis for relief of the pain was performed, and blood escaped freely from the opening before rupture had had time to occur. Roosa considered that such cases fell under the same category as his own. In the one about to be described there was a family history of apoplexy, though whether this is important or not I cannot say, especially as there is no evidence of atheroma or kidney disease in the patient herself; secondly, an antecedent cold in the head; and, thirdly, the occurrence of menstruation immediately following the hæmorrhage from the ear.

E. S., a single lady, aged forty, consulted me on April 23rd, 1896, for deafness and throbbing in the left ear, accompanied by bleeding. Three weeks previously, whilst travelling in Italy, she took a Russian bath, which caused great prostration, owing to a too long stay in the hot chamber. Later in the day she was exposed to a strong draught from an open window, in an hotel at Naples, but continued afterwards in fair health, except for a cold in her head, which dated from the above occurrence. At five o'clock in the afternoon preceding her visit to me, and after having been a week in London, she was attacked with severe pain in the left ear, which lasted till eleven at night, when, accompanied by a tearing sensation in the ear, blood flowed freely from the passage. The pain then became easier, but returned during the night, until relieved again by a second flow. The blood lost, altogether, was sufficient to saturate an ordinary sized lady's handkerchief.

The hearing was remarkably good on the affected side before this attack. The family history showed that an aunt on either side had died of apoplexy, and a paternal grandfather had had several "strokes." On removing a plug of wool from the meatus, which was saturated with blood, I found both tense and flaccid portions of the membrane bulging

slightly. A small perforation, through which blood-clot could be detected, was visible in the anterior quadrant. Raised conversation was heard at a yard, and a forty-inch watch in contact with the ear. A tuning fork on the vertex was heard louder on the left side. The right ear had long been deaf from chronic non-suppurative catarrh, and gave Rinne negative; the watch being heard with difficulty.

The general health in other respects was good. There was no pulse tension, but the bowels were slightly constipated. Menstruation, which was regular, had commenced the previous evening.

Bleeding from the ear having ceased, the only treatment advised after reassuring the patient, who was excessively nervous about her condition, was perfect rest in the house, and the exhibition of a saline purgative, t. d. s. A plug of sterilized cotton wool was placed in the meatus, and directions given to renew it occasionally.

Two days later the patient left town for the country, but returned on May 13th, when I ascertained from her medical attendant that there had been no return of the hæmorrhage, and no suppuration from the middle ear, though a furuncle had formed on the floor of the meatus. The drum membrane was still much thickened, but the outline of the handle of the malleus was beginning to reappear. The perforation was closed. The hearing power for conversation was improved, but the watch was audible only on contact. Catheterization elicited a dry sound, but did not increase the hearing distance. The patient left town again shortly after this date, and I have not seen her since, but she informs me that her hearing is practically restored in the affected ear to its former condition. The hæmorrhage in this case is not easy to account for. There had been a previous head cold, and therefore probably a catarrhal condition of the tympanic lining membrane, but in the absence of deafness during the interval it is not possible to say that the Eustachian tube was obstructed. There was no history of influenza, or of violent coughing or sneezing. The patient is not a subject of hæmophilia, so that a special weakness of the vessel walls could hardly be suspected to exist. Roosa regarded his cases as examples of acute otitis media running an unusually rapid and violent course, the exudation not merely escaping through, but actually breaking down, the walls of the vessels. In the above instance, although there were neither febrile symptoms nor subsequent suppuration, I am at a loss to offer any better explanation than that given by Roosa. The coincidence of a menstrual period may have had some causal connection. I shall be glad if any otologists present will give me their opinion.

Dr. MILLIGAN: I have seen several of these cases, and they have been in association with influenza. Curiously enough, in the second epidemic of influenza, I saw within a very short time six cases of acute hæmorrhagic otitis media. In all the symptoms were precisely the same: violent pain in the ear, accompanied by a fairly extensive hæmorrhage into the middle ear. In those cases, however, I must say I treated them on rather different lines from those adopted by Dr. Pegler, because it seemed to me that having blood in the middle ear, the first thing to do was to get rid of it. Consequently, I made a very long incision in the membrane, passed a catheter, and washed the middle ear out. The

cases did exceptionally well, and being of an acute character, lasted only a comparatively short time, while hearing was perfectly regained. It seems to me that if one is to allow the clot to take its chance of absorbing, there is a distinct risk that the hearing will not return to its original condition, and that permanent damage may result. As regards the indication for paracentesis, I would regard bulging of the membrane and the presence of fluid in the middle ear as signs of the first importance. When I perform a paracentesis, it is generally either to get rid of muco-pus or of pus itself. I do not quite agree with Dr. Pegler that the pus comes a few hours afterwards; because if a paracentesis is to be performed to relieve pressure, the products are supposed to be there before the paracentesis is performed. Almost invariably, in my experience, when one performs this operation, the pus or the muco-pus issues out at the time, or may or may not be subsequently washed out. I should like to refer Dr. Pegler to a short article which I wrote in "The Medical Chronicle" upon this subject, in which several cases were recorded where blood cysts were found upon the membrane. Whether one could classify these cases as middle ear affections, or as affections of the membrane itself, I could not quite say. It seemed to me that they were really affections of the membrane; that the blood vessels of the membrane had become immensely dilated from some special reason, and, having given way, had formed little blood tumours upon its surface. These cases are very interesting, and, I think, comparatively rare.

Dr. PEGLER, in reply to Dr. Milligan, stated in regard to the treatment of the case, that the patient was in an excessively nervous state, and would not hear of any operative procedure. He, however, saw no very strong indications for such interference, and trusted to the contained clot becoming gradually absorbed. He gave a favourable prognosis, and the course of events seemed to justify this, as well as the non-adoption of any active treatment. He did not think the case coincided with those he had seen described as following influenza, in which the hæmorrhages were practically confined to the drum membrane.

Card Specimens shown by Mr. LAKE.

1. Cystic middle turbinated bone removed during life; no microscopical examination has been made.

2. Absence of tendon of tensor tympani. There is no history to this case, but it is probably a developmental error, the tympanum being free from disease, and there being no visible cicatrix in the membrane.

3. Curiously tortuous lateral sinus. Had this subject suffered with sinus phlebitis, cleansing the sinus would have been a difficult task.

4. Early or slight hyperostosis of the external meatus.

5. Calcareous deposit in right posterior superior segment of membrane.

6. Adhesion of malleus to promontory and incus to membrane tympani from an old woman of seventy years.

7. Persistent squamo-mastoid suture from a subject forty years of age.

DISCUSSION ON TRACHEOTOMY IN THYROTOMY FOR FOREIGN BODIES IN THE LARYNX.

Opened by the PRESIDENT.

Dr. G. STOKER : It will be within the recollection of the Association that at one of our meetings Mr. Marsh read the notes of a case of thyrotomy performed for the removal of a foreign body from the larynx, and stated therein that he had not considered it necessary to perform a preliminary tracheotomy. I entirely agreed with him, and, in doing so, called down the scientific wrath of several members of the Association ; but as the only valid reason put forward then against the procedure was, that it was an offence against the canons of surgery, and as I believe this canon, as it is even sometimes with other canons, is more honoured in the breach than otherwise, I gave notice of this discussion in order to more fully state my own views, and give the Fellows an opportunity of again expressing those views, or the alterations of them, which time and profound meditation may have induced.

I think it will be conceded that this is not a question of necessity (the fact that Mr. Marsh's case proceeded to cure without trouble or complications proves this), and that, therefore, we have but to consider the question : "Is it expedient or not to perform a preliminary tracheotomy in cases of thyrotomy, when performed for the removal of foreign bodies from the larynx?" It seems to me that it will facilitate discussion if we simply take up, in order, the points—and they are very few—which may affect our decision.

The principal points are, I consider—

1. Bleeding. (*a*) Primary. (*b*) Secondary.
2. Respiration.
3. Affections of respiratory tract.
4. Dangers of the operation of tracheotomy itself.

I would first premise as an essential point in reference to all that is to follow, that the patient is placed for operation in the head-down position.

Bleeding during the Operation. There is no doubt that if a preliminary tracheotomy is performed and a tampon canula inserted, blood is thus prevented from entering the air passage during the operation and producing coughing or suffocation ; but this desirable consummation is also arrived at by operating with the patient in the head-down position.

Under any circumstances primary bleeding is not likely to be severe. It is *not* as if a tumour were to be removed and deep strictures in the larynx interfered with. At the most there may be a certain amount of granulation tissue displaced, and this only where the foreign body has remained a long time in the larynx ; and even then it can be easily and permanently controlled by pressure styptics on the galvano-cautery before the wound is closed. I fail to see how a tampon canula presents any advantage at this stage of the operation.

Now as to secondary bleeding. It is obvious that under the conditions mentioned this is most improbable if not quite impossible. It is no more likely to occur than in cases where foreign bodies are removed from the

larynx through the mouth, and I hardly think anyone will advocate a preliminary tracheotomy under such circumstances. If it does occur from the operating wound or incision, then the larynx must be reopened whether the preliminary operation has been performed or not.

If secondary bleeding is possible at all, it is only a very sudden onset that could prove dangerous, and this danger could be at once mitigated by placing the patient in the head-down position while the larynx was being reopened. As I presume a nurse or attendant would be always on the watch, this placing the patient in the desired position, if necessary, could be reduced to a certainty.

Respiration.—(a) Provided the patient is placed in the head-down position, breathing during the operation is perhaps easier than in any other position. This was shown by Dr. Howard, of New York, at one of the earliest meetings of this Association in a discussion on a paper on anæsthetics in operations on the nose and throat, when this head-down position in removing post-nasal growths was, I believe, first suggested.

(b) This operation, it must be remembered, is not undertaken to prevent suffocation, and it is, I believe, always easier to breathe through the natural passages than through a canula.

(c) Once the thyroid is opened, breathing must be easier, and the facility is again increased when the foreign body is removed.

It is obvious that in opening the trachea the nearer the opening is to the lungs the greater the danger, and that in avoiding the lower opening entailed by a preliminary tracheotomy, one is avoiding an evident and positive danger.

There is no doubt that if the preliminary tracheotomy is performed and the tampon canula is inserted, blood is prevented from entering the air passage during the operation and producing coughing or suffocation, but this, as already mentioned, is also arrived at by operating with the patient in the head-down position.

The after dangers to the air passages, such as bronchitis and tracheitis, are surely increased by the presence of a canula in the trachea, and more especially of a tampon canula, as it, above all, must cause an accumulation of mucous or other discharges in the trachea, and set up great irritation, if not actual inflammation.

Dangers of the Operation of Tracheotomy.—It will hardly be denied that there are certain dangers and difficulties and delays attending the operation of tracheotomy itself, *i.e.*, bleeding, shock, puncture of a vein, with formation of clot in the heart and instant death: the difficulty of finding the trachea in certain cases—for instance, young children and patients with fat necks.

In conclusion—

1. It must be remembered that a tracheotomy can always be performed after the thyroid is opened, if it should be found necessary.

2. That without a preliminary tracheotomy there is practically no danger from primary bleeding.

3. The danger from secondary bleeding is remote, if not impossible.

4. The non-performance of a preliminary tracheotomy does not present any danger in reference to respiration.

On the contrary—

5. Performance of a preliminary tracheotomy largely increases the liability to the after dangers of tracheitis, bronchitis, or lung trouble.

6. The presence of a tampon canula must prove a source of great irritation and may induce tracheitis, etc.

7. That the operation of tracheotomy does in itself present dangers which are avoided by omitting it.

These being my contentions, I am of opinion that the operation of a preliminary tracheotomy is not expedient where thyrotomy is performed for the removal of foreign bodies from the larynx.

Dr. R. H. WOODS : As far as the operation of thyrotomy is concerned, I have had a small amount of experience, perhaps four or five cases ; but I have never done one for foreign bodies in the larynx. I entirely agree with Dr. Stoker in thinking that preliminary tracheotomy for the removal of foreign bodies is an unnecessary operation. I find it very difficult to imagine the circumstances under which it can be at all excusable. If the foreign body has been in the larynx a very long time, it is conceivable that, by causing œdema, it might cause obstruction to respiration, which would call for tracheotomy in the first instance for the purpose of relieving the dyspnœa. If, on the other hand, the foreign body were there for a short time, and there was no dyspnœa, the tracheotomy could in that case be of no use. I think, therefore, whether a tracheotomy is to be performed or not is entirely settled before the surgeon comes to perform thyrotomy. The only other condition that occurs to me now as being a plea for a preliminary tracheotomy is the anticipation of the possibility of subsequent œdema from the infection of the mucous membrane by the sharp edge of the foreign body. If œdema of the larynx ensued, the performance of tracheotomy at the same time as the thyrotomy might be convenient, because you need not remove your tracheotomy tube until the œdema subsided ; but even under these circumstances the preliminary tracheotomy can be dispensed with, because if after the thyrotomy the larynx becomes œdematous, there will then be time to consider the question.

Mr. LENNOX BROWNE : I feel disposed to traverse all Dr. Stoker's premises, and, as a consequence, all his conclusions. I have asked a few of the Fellows if they have been in the habit of doing thyrotomy for the removal of foreign bodies, and I cannot find one who has. I have never done it, but I have performed tracheotomy over and over again, and I have time after time seen the foreign body immediately and forcibly expelled ; for that reason alone I should be inclined to do a preliminary tracheotomy. The operation is a very safe one, and without danger to the patient. The tube is taken out, and the wound may be allowed to close so soon as the foreign body has been removed. Thyrotomy is, I say, a rare operation for the removal of foreign bodies, and if the foreign body be situated in a portion of the larynx to be reached by splitting the thyroid, it would almost certainly be possible to remove it by instruments introduced through the mouth. Dr. Stoker has not reported any cases in which he has pursued this treatment ; therefore, I think it is a little previous to advocate a certain method which is contrary to the general

canons of surgery until some practical objection is found to obtain adversely to our prevailing practice, and I do not imagine that this discussion will lead to any serious change of procedure in the surgical world at large.

Dr. SCATLIFF: It occurs to me that as we are discussing the advisability of "*preliminary tracheotomy in thyrotomy for the removal of foreign bodies in the larynx*," we are entitled to consider the advisability of other alternative preliminary proceedings, and in that case I suggest that laryngotomy appears to me to be the more desirable operation, particularly considering that *every thyrotomy ends in a laryngotomy*.

If the foreign bodies be in the trachea below the larynx it is a different matter: and, moreover, we are not considering that question.

Dr. BOSWORTH: I have no experience whatever in regard to this operation for foreign bodies. My operations of thyrotomy have been used for growths or tumours, and I confess that I have always felt it a safeguard when cutting into the larynx to have a tube in the trachea. Tracheotomy or thyrotomy may be one of the simplest operations in all surgery, and it may be one of the most formidable. It is one of the operations in which we are likely to encounter very serious results. I should certainly give my vote in favour of preliminary tracheotomy.

Dr. HILL: I endorse what Mr. Lennox Browne has said, that very often when you have done your tracheotomy the whole thing is at an end. It is far better to have one incision lower down than right up in the larynx, where damage sufficient to permanently affect the voice may be done.

Dr. MILLIGAN: So far, my experience with thyrotomy has been entirely confined to the removal of growths. I have never had an opportunity of doing the operation for a foreign body in the larynx, but the little experience that I have had would, in general, certainly impress me with the safety, and I might say the advisability, of performing a preliminary tracheotomy. I think there is a great safeguard in a preliminary tracheotomy. In the event of the operation proving more difficult than at first anticipated, you at least have a way into the trachea, which allows the patient to inspire a full current of air. I think that this is a consideration which every operator should take into account. If, on the other hand, the operator is accustomed to perform thyrotomies, he may be bold and attempt the operation without any preliminary opening into the trachea. At the same time, one's experience of foreign bodies is such that I think great value is to be set upon making an opening in a position lower than the site of the foreign body, because the making of such an opening is frequently sufficient to cause complete emission of the body, and therefore an operation such as thyrotomy would not be called for. I think also there is another point to be taken into consideration, and that is the possibility of catching the foreign body and removing it through the tracheal wound. Both these points are favourable to the performance of tracheotomy, and opposed to thyrotomy, because one knows, however carefully thyrotomy is performed, and however carefully it is treated afterwards, there is a certain risk that the function of the vocal cords

may be more or less injured. From my slight experience it is difficult for me to say much, but I think it is important to have an expression of opinion from the Fellows as to whether, as it were, a double operation should be performed, or only one. I think also one point has not been touched upon in the discussion, and that is this: whether, in the event of performing thyrotomy and tracheotomy, it would not be advisable immediately after the performance of the double operation to close the tracheal wound, and dispense altogether with the canula.

Dr. STOKER: The general tenor of the remarks are entirely satisfactory to me. As I stated at the commencement of my paper, this discussion has nothing to do with the removal of growths, but simply foreign bodies. Mr. Browne's remarks, of course, are always very interesting, but they are entirely outside the question on this occasion. He has never performed the operation, so that his practical experience is *nil*. It is an abstract question, and we have to get at the reasons for and against.

Mr. Browne has devoted his time to fighting the air. The question is not at all as to the nature of the operation one would perform, or the methods one would pursue in removing a foreign body from the larynx; but, having decided to perform a thyrotomy, would you or would you not perform a preliminary tracheotomy, and any remarks outside this point are totally irrelevant.

I distinctly mentioned with regard to the closing of the wounds, because I said if bleeding does occur from the operation the larynx must be reopened, whether the preliminary tracheotomy is performed or not. I perfectly agree that the tracheotomy wound should be closed, but if there is any secondary bleeding from the wound, you naturally reopen it. Dr. Milligan, again, has expressed very valuable opinions with regard to the performance of preliminary tracheotomy for growths, and there is no doubt we are all agreed on this point. I have, however, been dealing with foreign bodies, and I venture to think when it does become necessary to perform thyrotomy for a foreign body which is not expelled by cough, and cannot be got out through the mouth, they will not perform a preliminary tracheotomy.

AUSTRIAN OTOLOGICAL SOCIETY.

First Special Annual Meeting (OTOLOGENTAG), June 28th and 29th, 1896.

("Monatschrift für Ohrenheilkunde," July, 1896.) Reported by Dr. JOSEPH POLLAK.

President—Prof. GRUBER.

Director S. HELLER. *Demonstration of a Case of Psychological Deafness in a Child.*

At the sixty-sixth gathering of German naturalists in Vienna, in the year 1894, I had the opportunity, in a discussion there held, to demonstrate the occurrence and the treatment of this abnormal condition in childhood, and I then described it as psychological deafness. At the same time I demon-

strated in seven cases the stages of development of the abnormality, and also the results of educational treatment. My experience during the last two years has strengthened my convictions with regard to the matter. The condition is apt to be confounded with deaf-mutism, and looked upon as beyond treatment. I hope to indicate the necessity for having children thoroughly investigated before being committed to deaf mute institutions, so that genuine deaf mutes may be distinguished from those suffering from psychical deafness, and that distinct treatment may be carried out. The case before us is one of a boy who, at the age of three and a half years, was handed over to the writer by Professors Widerhofer and Politzer, who agreed that the case was one of psychical deafness. The mother of the child is nervous, and he himself is always highly excitable, and very often sleepless, but never subject to convulsions.

Prof. Politzer found the appearances in the ear to be normal. In spite of this the child never learnt to speak. He could only utter fragments of words, and of words of two syllables only one or the other syllable, and that only very imperfectly. In the course of time even these rudiments of speech were almost entirely lost without any new ones appearing in their place. When the boy came under the writer's observation he did not understand a single word, and it was almost impossible to fix his attention upon other sounds. He reacted only in a very reflex way, and only when the sounds were extremely loud. Of the fragments of speech which he still retained, the words "mamma" and "Berta" were the most distinct, but these did not appear to have any signification to him; at the same time he was in a state of extreme motor agitation and excitement, which at times amounted to paroxysms, in which he shrieked in a loud tone, struck out all round him, bit the attendant, and injured himself.

After this excitement there occurred a reaction in the form of complete collapse. In contrast to the insensibility of the boy to single loud sounds, there stood out the fact that melodies, such as those issuing from a musical box or a hand organ, seemed to soothe the patient when he was in a condition of excitement. Attempts were made to string together the fragments of words which the boy possessed, first speaking them and then singing them in his ear, in the hope that unconsciously he might repeat them, but this failed completely. Even after a time he gave up uttering fragments of words in play, and even melodies seemed to lose their effect. It was only after four months' practice of the method of concentration which will be later described, that the recognition of the association of word and object began to be awakened. The word "ball" was the first which he learnt correctly, and notably the whole sentence, "Das ist ein—ball." Other words followed these, and the faculty for speech gradually burst forth and developed itself, so that the child began to have a certain degree of assurance in recognizing and selecting the various objects used in the lessons; and as he acquired certainty he began to hear more distinctly and from a greater distance, and furthermore became still more disposed to direct his attention to noises of different kinds, although at first he could not distinguish what they corresponded to. The progress was, however, far from being steady

or uninterrupted. When the excitement stage came on again his power of attention diminished, and he took less interest in what was going on round about him. However, although during these intervals there was an absence of progress, there was no marked retrogression, and the instruction could be resumed practically at the point where it had left off. Of late these fluctuations have been less marked, and there is every hope that they will not recur.

It must be noted that the above described method is not alone sufficient without a number of other precautions and subsidiary measures being adopted, such as will later be described. Those who see the boy must be struck by the fact that he has quite normal hearing perception, and is able to make use of sounds just as well as an average child of his age; and, furthermore, he asks questions. The two chief points in regard to the treatment of such cases in excitable individuals are: First, to combat the persistent excitability; secondly, to awaken and cultivate the faculty of concentration and perception in the little patients. With regard to the diminution of the excitability, it is necessary to remove all those external circumstances which are apt to irritate or disturb the unstable equilibrium. Along with the necessary therapeutic treatment and the strict isolation—if possible, in the country—there are still three methods which have been found particularly useful, namely, lying on the ground, gymnastics on the ground, including rhythmical, at first passive, movements of the extremities, and of the whole body. The method of concentration should then be started, and the patient should be taught to associate the spoken word with the object indicated, and in this way those physical processes should be developed which lead to the acquisition of normal speech.

Prof. URBANTSCHITSCH. *Demonstration of a Case of Psychological Deafness.*

The patient was a teacher, aged twenty-two, a Russian, who for the last eight years had become dull of hearing without any recognizable cause, and as the result of this increasing deafness had become affected with extreme nervousness. She was treated with galvanism for two months in Königsburg with good effect, but subsequently, owing to the illness of her father, her hearing became again more defective, and on account of this she was prohibited from all intellectual exertion. This had an unfavourable effect, and there resulted extreme mental depression with times of excitement. The patient frequently lost consciousness, thought that human flesh was mixed with her food, and, therefore, refused to take nourishment, while she further became affected with various delusions. Vertigo then appeared, but along with this there was, if anything, an improvement in her hearing power. The patient apparently made repeated attempts to commit suicide, but this was only a pretence, as she only did it in the presence of other persons. In the further course of her illness she was treated by various physicians by galvanism, static electricity, and catheterism without result, and her ear trouble appeared to be quite incurable. Towards the end of December, 1895, she came under Prof. Urbantschitsch in the general polyclinic. On examination, both

tympanic membranes were found to be slightly indrawn, but otherwise fairly normal. The cone of light was shortened and a slight hyperemia of the wall of the labyrinth was recognizable through the membrane. Hearing for speech was almost entirely gone, and the patient only perceived single words through the hearing trumpet, and these she misinterpreted. Vowels shouted into her ear without the trumpet produced a distinct auditory impression, but the patient could not repeat them correctly, and confused the various vowels one with another. The tuning fork was heard equally by air and bone conduction, and Rinne was negative on both sides. The watch was not heard even in contact. On the other hand, the patient distinguished loud accordion notes wonderfully well, and recognized single tones from *contra* F up to *f* 4. The tones of Galton's whistle were heard up to nearly the normal limit of perception. Galvanic reaction indicated an increased sensibility of both auditory nerves. The high degree of the deafness for spoken sounds contrasted singularly with the fairly good hearing for musical tones, on which account the idea arose that the former was not in reality a deafness properly so called, but possibly, at least in part, a defective understanding for speech; therefore, in part at least, mental, and not entirely physical. On careful inquiry from the patient as to whether she did not perceive sounds of spoken words, she stated that she could hear them when uttered with a moderate degree of loudness, even from some distance, but that she did not understand them. At the same time, it was remarkable that occasionally later on, sometimes only after an hour or two, a word, or sometimes even a sentence, which she had not previously understood suddenly flashed again upon her mind. This last observation seemed to prove with certainty the presence of at least a partial mental element in her defective hearing.

Towards the end of December the hearing exercises were started, and within the first few weeks the results confirmed the opinion that the case was one of partial mental deafness, and the patient was able within two weeks to hear many words and short sentences quite correctly, although at first she mistook even single vowel sounds. At present, although she is far from normal, she understands speech when uttered close to the ear, and without any very great degree of loudness. Single words in the middle of a sentence are frequently incorrectly or not at all understood, and this also when the word is shouted loudly in the ear. Occasionally also the patient understands only the beginning and the end of a sentence, and only later on the remaining words, sometimes after a few seconds. Sometimes a short sentence was not understood at all, while each word of it was understood perfectly well when forming part of another sentence. When the former sentence was repeated it occasionally occurred that the patient said she could not make out a single word, but remarked that it was the same sentence that she had previously failed to understand. The psychical character of her disturbance of hearing exhibited itself equally when her own mother tongue, Russian, was made use of, as well as French, with which she was well acquainted.

At present it is possible to carry on a certain amount of conversation with the patient in a somewhat subdued tone of voice, and even in distinct

whispering close to the ear. There is a slow increase in the hearing power for musical tones also, so that occasionally she recognizes fragments of melodies, or even short tunes, whereas at first she could only appreciate single tones, and not combinations or sequences.

Prof. GRUBER pointed out that there were various forms of psychical deafness which had to be distinguished. Some individuals are so backward in their mental development that they hear individual sounds perfectly well, but when complete words, or a series of words, are concerned, they are quite unable to follow them, and only pick out individual tones which have struck them, and repeat them. In such cases the memory for words has to be exercised. Much depends upon intelligence, and as we run over the whole line with a single glance, and read, it without being able to see each individual letter, so in the same way the practised individual can follow with the ear without hearing each individual sound. Hence it happens that many individuals of this kind are long looked upon as deaf mutes, whereas they hear sufficiently well to learn to speak if their defective powers of apprehension and of memory are kept in view during their education. Prof. Gruber mentioned that he had at the time under his care such a case in a boy nine years of age, who had been declared to be an incurable deaf mute by a skilled aural surgeon four years previously. When he first saw the boy he made the diagnosis of psychical deafness, and since then a rational method of instruction had been carried out, with the result that the boy was able to understand ordinary conversation in his mother tongue, and to speak in an almost normal manner.

Prof. URBANTSCHITSCH. *A Demonstration of Eight Cases of Radical Operation, in which the Retro-Auricular Opening had closed.*

1. A patient, aged twenty-one, who, when eight years of age, had a suppurative inflammation of the right middle ear as the result of measles. The radical operation was carried out on the 11th December, 1894. In the beginning of February, 1895, the cavity was dry, and it was only at long intervals the seat of a slight exudation. The opening has since then been closed, and the hearing has remained unaltered.

2. A girl, aged fifteen, who for twelve years had suffered from purulent inflammation of the right middle ear, with frequent headaches. The radical operation was performed on the 4th January, 1895, and in the middle ear there were found carious and cholesteatomatous foci. The cavity was dry at the beginning of the following April, and has remained so ever since. Before the operation the watch was heard at one centimètre, whispered voice at fifteen centimètres; after the operation the watch was heard at thirty centimètres, and the whispered voice at six mètres. There was in this case a remarkable re-growth of tympanic membrane extending to about one-third of the normal one.

3. A youth, aged sixteen, with purulent inflammation of the left middle ear of three years' duration, with severe headache and bodily weakness. The radical operation was carried out in January, 1895, and from the following September onwards the cavity remained quite dry. The hearing has improved, and the headache and weakness have quite disappeared.

4. A man, aged twenty-two, who for ten years had suffered from left-sided purulent median otitis, with paralysis of the facial nerve. The radical operation was performed on the 23rd January, 1895. There was a cerebral hernia into the attic. Since the 30th May the cavity has remained dry. The hearing is unaltered, and the facial nerve still parætic.

5. A man, aged twenty-six, who had had suppuration from his right ear for three years, and since 1893 several attacks of insanity. The radical operation was carried out on 7th February, 1895 (cholesteatoma). A few days after the operation there came on a facial paræsis, which, within a week, developed into paralysis, then slowly passed off, leaving behind it a slight spasm of the upper eyelid; ten weeks after the operation the cavity appeared dry, and remained so; the head of the stapes and the tendon of the stapedius muscle were plainly visible. The hearing, which before the operation was *nil*, increased to two mètres for the watch, and eleven yards for the whispered voice. Since the operation there has been no further mental disturbance.

6. K. B., aged eighteen, affected with suppuration from the left ear, as the result of measles, since she was two years of age. The radical operation took place on the 3rd December, 1895. On the 15th of that month she was attacked with scarlet fever; since the 26th January, 1896 the cavity has remained dry and the hearing unaltered.

7. A youth, aged seventeen, who for three years had suffered with bilateral purulent otitis following measles. On the 23rd October, 1895 the right ear was operated on, and since the 27th of the following December the cavity remained dry. The hearing increased from twenty centimètres to two yards for the whispered voice. The left ear was operated on in January, 1896, but it still continues to emit a moderate amount of secretion.

8. A man, aged forty-four, who for eight years had suffered from suppuration from his right ear, and with frequent attacks of severe headache and vertigo. On the 12th February, 1896, the radical operation was carried out. Since the end of May the cavity has remained dry the hearing unaltered.

Prof. GRUBER. *Angioma of the Auricle treated by Operation.*

Prof. Gruber showed a drawing from nature of an angioma of the auricle, which from its outward appearance gave no suggestion as to its nature, but presented all the appearances of an ordinary sebaceous tumour and as such it was submitted to operation. It showed itself as a broad-based tumour of the size of a pigeon's egg, situated on the concha of the left auricle overhanging the external auditory meatus, and covered with skin identical in colour with that of the normal ear. Four weeks before presenting himself in Prof. Gruber's clinic the patient received accidentally a blow on the ear from a loaded sack. From this there resulted a roundish excrescence of about three millimètres in diameter on the most prominent part of the growth, the floor of the excretion being covered with pus; in all other places the skin was perfectly normal. According to the patient's account he had had this growth for about thirty years, and its increase

in size had been exceedingly slow. It was never painful, but highly elastic, immovable, and without the slightest trace of pulsation. It did not interfere with the hearing, and caused no discomfort, so that the patient only sought assistance on account of the superficial ulcer resulting from the injury. From all these circumstances it was taken for a sebaceous tumour, and all the more as it is well known that the large sebaceous glands in the concha frequently give rise to tumours of that sort. There was never any bleeding from the growth even after the injury.

The operation was carried out on the 16th of May of last year, by means of two crescentic incisions, such as would allow of the separation of the cutis from the supposed cyst. This, of course, was not possible, and the incisions caused a profuse hæmorrhage, which showed at once that the growth was a vascular one. As rapidly as possible the growth was scraped away with the help of a knife and a sharp spoon, very little blood was lost, and an iodoform compress was applied. The wound healed perfectly without suppuration.

The case presents a good deal of interest. Vascular new growths on the auricle are, as is well known, either flat teleangiectases, and they are characterized generally by their livid colour, sometimes by pulsation—or, on the other hand, they are sometimes very rapidly growing cavernous tumours. In Prof. Gruber's experience, when the tumours were not livid, they pulsated so that the diagnosis was generally easy: but in the present case neither of these signs was present, and one was driven to the opinion that the growth was a sebaceous cyst. From the appearance one would have taken the growth for a fatty tumour rather than for an angioma. The microscopical investigation of the tumour showed that it was cavernous, and had developed subcutaneously and without any large arterial branches. The case shows also that such tumours, when not too large, and when they are free from pulsation, may be removed by means of sharp instruments, without fear of any serious degree of hæmorrhage.

Prof. POLITZER. *Demonstration of a Case of Recovery after Otitic Pyæmia with Thrombosis of the Jugular Vein and Purulent Metastasis in the Left Elbow Joint.*

The patient was a young man, aged nineteen, who when seven years old suffered from severe scarlatinal diphtheria, which extended over the pharyngeal, nasal, and buccal cavities, and to both tympana. There was almost complete destruction of the membranes, and at first total deafness. During convalescence the hearing gradually improved, but there still remained a certain amount of deafness; the suppuration had slowly disappeared, but the perforations remained persistent.

Ten years from the beginning of the diphtheritic otitis, the patient became affected with an acute recurrence of suppuration in the right ear, and severe fever and pain in the mastoid region, so that on the sixth day it was necessary to open the mastoid process. After this operation, and the establishment of a communication between the operative opening and the tympanic cavity, the fever still continued, and during the following two days oscillated between 39° and 40·3°, so that it was then necessary

to expose the lateral sinus. This appeared normal on inspection, but in the blood drawn from it by means of a hypodermic syringe streptococci were found to be present.

After this operation no improvement took place, but, on the contrary, daily rigors came on with the characteristic fall of temperature below the normal, followed by elevation to between 39° and 40° . Along with the onset of the rigors there developed a painful cord-like swelling on the right lateral region of the neck, which was recognized to be a thrombosis of the jugular vein. These daily rigors with remittent temperature lasted for fourteen days, during which a phlegmonous inflammation developed round the thrombosed vein, and the patient presented signs of almost complete exhaustion. On the twenty-second day a purulent metastasis occurred in the left elbow joint, and from that time onwards the rigors ceased, and the temperature fell pretty rapidly to the normal. Four weeks later the patient was able to leave his bed, with an ankylosis of the left elbow joint. During the subsequent two years there had been only occasionally a slight purulent discharge from both ears.

Prof. Politzer would class this case along with those rare ones of recovery after otitic pyæmia with thrombosis in the sinus and in the jugular vein published by Gruber, Hesler, Urbantschitsch, Wreden, and himself. In this case there was obviously an inflammation of the vein produced by extension of the suppuration from the floor of the tympanum to the bulb of the jugular vein, and from here to the vein itself. According to Politzer's observations, otitic pyæmia with metastasis runs a more favourable course than septicæmia without metastasis.

Dr. BING. Demonstration of a Case of Chronic Suppurative Inflammation of the Middle Ear, Cured only after a Removal of the Malleus.

A woman, aged forty, had suffered with her ears probably since scarlet fever in childhood. She had, however, not sought advice with regard to it until six years ago, and since then she had been treated by various people without success. Four years ago she came under Dr. Bing's treatment, and he found the left ear healthy but the right one discharging, and after syringing the meatus he found inflammatory swelling of the soft parts. There was a loss of substance in the membrana tympani, limited in front by the handle of the malleus and by a part of the antero-inferior quadrant of the membrane, while the posterior border was not sharply defined; behind the manubrium there was a niche filled with granulation and inspissated pus, which had to be removed by means of the probe. Above the short process there was a perforation in the membrane of Shrapnel, which was also filled with exudation. The whispered speech could be heard at a distance of three mètres.

The treatment was confined to cleansing by instillations and syringing. The granulation and suppuration were partly removed by the application of perchloride of iron and alcohol drops. Improvement took place, but not complete recovery. Dr. Bing then sent the patient, in June, 1895, to Prof. Politzer's clinic for removal of the malleus. This was done under slight chloroform narcosis without accident. The malleus presented no signs of caries. On the fifth day the patient returned to Dr. Bing. The

suppuration still continued, and in the situation of the manubrium there extended from above a soft structure with a sharp point below, which was very tender on probing, but completely shrivelled up after repeated cauterization with perchloride of iron. There was a disturbance of taste on the corresponding side of the tongue, and various paræsthesiæ in the region of the trigeminus over the right temporal and malar bones, which lasted for four weeks, then gradually disappeared. After the use of alcohol instillations for a few weeks the otorrhœa completely stopped. At the present time the meatus is quite dry, the anterior half of the membrane is reduced to a small residuum, which allows of a view of the tympanic orifice of the Eustachian tube, and the upper segment of the tympanum was attached below to the inner wall of the cavity. This was quite dry, of a whitish grey colour, and covered with skin. The head of the stapes could be seen, and the hearing power for whispered speech was seven mètres.

DR. GOMPERTZ. *A Patient on whom the Radical Operation with Körner's Flaps had been Performed.*

After healing, the antrum and the tympanum seemed to have so grown together that the meatus appeared to be quite closed in its deeper part, and only to communicate with the tympanum by a very narrow orifice. After the cessation of the secretion which found its exit through this orifice, the opening began spontaneously to enlarge, obviously through absorption, not through necrosis of the cuticular flap which covered it, and after fourteen days the antrum, the attic, and the tympanic cavity were seen covered with a delicate shining cicatrix, perfectly freely open just as at the present time.

DR. MAX. *A Case of Malformation of the Auricle Rectified by Operation.*

After paring the edges of the cleft, and the application of three stitches, under cocaine anæsthesia, the defect was completely rectified.

DR. MAX. *Modification of the Polypus Snare.*

The ordinary handle was used, but the shaft was very thin, and bent in such a way that the anterior part was somewhat higher than the posterior. Instead of the ordinary steel wire he used a fine silver one. He had employed the instrument for three years with every satisfaction. It had the advantage that it could be introduced even in a narrow swollen meatus with very slight pain to the patient.

Dundas Grant (Trans. and Abs.).

(To be continued.)

BELGIAN SOCIETY OF OTOTOLOGY AND LARYNGOLOGY.

Meeting of 7th June, 1895.

President—Dr. DELIE.

M. BAYER. *The Microbe of Ozæna. Demonstration of the Coccobacillus of Ozæna in different stages of the Disease.*

M. DELIE. *An enormous Mucous Polypus from the Nasal Fossa.*

These polypi were taken from a man aged fifty-four, who had suffered from nasal obstruction for more than twenty years. The nose was distended from the root to the point; polypi protruded from the nostril and hung down into the pharynx.

By a lucky chance, the whole mass was removed from the left fossa by a single application of the cold snare; it weighed 40 grammes. The polypi in the right side required several applications of the snare: together they weighed 63 grammes. Thus the man had had in his nose polypi weighing 103 grammes.

M. DELIE. *On the Treatment of Spurs of the Septum.*

So long as deflections or spurs on the septum cause no inconvenience, they should be left alone. They should be removed (1) when they impede the free circulation of air in the nose; (2) when they give rise to troublesome reflexes; (3) when they are the seat of morbid processes (ulcerations, hæmorrhages); or (4) when they constitute a deformity in a nostril. It is worth noting that, apart from neoplasms of the nose or naso-pharynx, the greatest obstacles to free nasal respiration are situated in the anterior third or half of the respiratory portion of the nose, and less frequently in the posterior quarter. Narrowness of the middle portion of the lower part of the nose does not much interfere with respiration, provided the rest of the nasal cavity is of normal capacity.

In the anterior third of the nose there are two principal causes of obstruction—viz., hypertrophy of the inferior turbinated and spurs on the cartilaginous septum; in the posterior quarter the only cause of obstruction is hypertrophy of the posterior end of the inferior turbinated body. The spurs are mostly, if not entirely, cartilaginous.

What is the best method of removing them?

Bosworth's saw is more or less a blind and coarse method: it gives pain, in spite of local anæsthesia; it causes hæmorrhages; and the surface it leaves is rough and irregular, cicatrizes slowly, and is subject to various complications. Still, it is useful for very hard bony spurs.

Galvano-cautery is little used; it is too slow; it is followed by post-operative reflexes that last a long time, and its action is also painful.

Electrolysis avoids hæmorrhage, and has a sure action; but it is impossible to limit its action and prevent the occurrence of permanent perforations of the septum. Pain, both local and radiated, is produced at the time, and lasts for days in some subjects.

My gouge, with lateral guides (made by Fischer, rue de l'Hôpital Bruxelles), merits a place of distinction amongst such instruments. Its action is certain, very rapid, very clean, free from immediate dangers and later complications, and it is very simply and easily manipulated. It is the least painful of all methods of operation—a simple application of cocaine produces a sufficiently deep anæsthesia even in very nervous, excitable patients. I have never had to stop in the middle of an operation. The little shoulders on my gouge act as guides, and limit its action, making it impossible to perforate the septum. Placing the gouge against the anterior end of the spur, one pushes it rapidly backwards, in the main axis of the spur (when the spur is osseous a mallet may be used), and the whole operation is over in less time than is required to put a saw into position. I have never seen serious hæmorrhage, because the larger vessels of the nose are lower down than the spurs and are not touched. (Contrast the operation with the saw.) Simply wash the nose with warm aseptic water, and a little resorcin in oil (one in ten). The edges of the wound rapidly unite without painful or inflammatory reaction or the formation of any slough. With my gouge I have never seen a permanent perforation produced. Even in cases where the apparent spur was really a >-shaped bulging of the septum, and where accordingly it was impossible to operate without producing a perforation, the two edges soon became soldered together and perfect union resulted. The same is true of what I call "spurs of the nostrils"—*i.e.*, irregular, often conical, projections from the anterior extremity of the septum.

If during cicatrization adhesions seem likely to form or exuberant granulations spring up, the part should be massaged with boric vaseline or resorcin in oil. or in extreme cases cauterized with trichloracetic acid.

MM. BAYER and DELSTANCHE both spoke in favour of the instrument.

M. DELSAUX. *A Case of Otitis Media Purulenta causing Sinus Thrombosis.*

M. X., age thirty-two, had had otorrhœa (left) for ten years; consulted me in February of this year. I found copious purulent discharge, double perforation in the membrane, with a small polypus projecting through the postero-inferior perforation; much pain, insomnia, and fever for two days. I removed the polypus, and ordered boracic treatment, with instillation of phenate of cocaine.

Two days later pain in mastoid, specially towards the point; next day pain worse, accompanied by shiverings, fever, cephalalgia; head fixed as in torticollis. Opened mastoid, keeping specially towards the point; a little pus found in the cells, but no purulent collection. Smell very strong, like that of an empyema of the maxillary sinus. Antiseptic dressings; great improvement, and almost complete disappearance of the pain for three weeks.

Then came on intermittent fever, frequent rigors, left frontal headache, tenderness on pressure along the left sterno-mastoid, head fixed, skin sub-icteric. At the postero-superior part of the meatus, at the junc-

tion of the cartilage with the bone, a fistula was found about two centimètres long. Guided by a probe in the fistula, I removed part of the posterior wall, and entered the antrum. Pus and blood came away from a point somewhat further back. For the next fortnight patient was sometimes better, sometimes worse; temperature as high as 40° C. Then albuminuria appeared; weakness, œdema of legs and left hand. One morning intense dyspnœa. Pressure on the left side of neck produced a copious discharge of pus from the wound. A counter opening was made in the neck and tracheotomy performed, but the patient never wakened up from the chloroform sleep.

Autopsy.—Dura mater thickened; left hemisphere of brain covered with a layer of green pus, tending to collect about the Sylvian fissure; thrombosis of left lateral sinus as far as the torcular; also of posterior half of right transverse sinus, and of the petrous sinus. The thrombus extends along the internal jugular towards the root of the neck; the whole left sterno-mastoid region bathed in pus; kidneys decomposing.

The osseous wall of the sigmoid sinus is eroded, and the fistula in the postero-superior wall of the meatus leads directly into the sinus. Two other purulent tracks are found in the outer surface of the mastoid process, one in connection with the operation wound, the other lower down, still covered by the fibrous attachment of the sterno-mastoid muscle.

M. BECO: Let me report a similar case which I saw lately.

A child, ten years old, had had otorrhœa, which had ceased, but reappeared during convalescence from pneumonia. When I saw the case there were hectic fever, many rigors per day; extreme emaciation; consciousness intact, except, during the febrile attacks, a little delirium; from time to time slight pain in the left temporal region; mastoid intact, and quite free from pain even on strong pressure, except at the extreme point; meatus free, wide, with no affection of the postero-superior wall; perforation of the membrane, filled with a small drop of fœtid pus; temperature 40.7° C.

I opened the antrum, having to penetrate eight or ten millimètres through very dense bone, and got away half a spoonful of brownish pus. The superior walls of antrum and tympanum were destroyed, and the suppurating cavity extended far back. I curetted thoroughly, being very careful in dealing with the posterior wall, where there was the danger of opening the lateral sinus. Iodoform gauze dressings.

After three days of improved health the fever returned, not two or three times a day, but once in twenty-four, thirty-six, or forty-eight hours. During three weeks careful dressing and exploration of the wound were carried out, then the patient was chloroformed again and a search made for the source of infection. Forwards nothing was found, but from directly inwards and backwards considerable masses of bone were removed from the base of the pyramid. Pus was removed apparently from the posterior surface of the pyramid; from that time improvement set in, and the child is now in perfect health.

M. SCHIFFERS reminded the Society of a case of phlebitis of the cavernous sinus, which he had presented to the meeting at Antwerp in 1894.

M. GOUQUENHEIM presented a *New Instrument* for opening into the antrum maxillare through the alveolus.

M. HENNEBERT. *Epithelioma of the Ear.*

At our last meeting in February (*see JOURNAL OF LARYNGOLOGY*, p. 242) I reported a case of epithelioma of the left ear. About a month and a half after the operation complete recurrence *in situ* had taken place; paralysis of the left facial nerve gradually came on; the patient grew steadily weaker, and died at the end of May, about six months from the onset of the disease.

Microscopic examination of the growth confirmed the diagnosis of "epithelioma."

The tumour was an enormous, ulcerating and fungating cauliflower-like mass, fixed to the left temporo-parietal region; greatest diameter about 12 centimètres, with a deep excavation in its centre. It pushed the auricle downwards and forwards, and extended along the temporal and zygomatic fossæ. Having perforated and destroyed the temporal bone and the meninges (making a hole big enough to admit a five-franc piece), the neoplasm formed a hernia into the cranial cavity, in the form of a spherical tumour as large as a Tangerine orange. The whole petrous portion of the temporal bone was replaced by the new growth, and the sphenoidal lobe of the brain presented a depression corresponding to the intracranial tumour.

I agree with M. Delstanche that the point of origin of the tumour was the middle ear.

M. HENNEBERT. *Decortication of the Inferior Turbinate.*

A girl of seventeen years, suffering from general hypertrophic rhinitis, had been repeatedly treated locally, but without permanent effect. I seized the posterior end of the hypertrophied inferior turbinate with a cold snare, and forcibly tore out the whole mucous membrane from it. The piece thus removed measures $5\frac{1}{2}$ centimètres by 12 millimètres by 10 millimètres (average). The hæmorrhage was considerable, but easily stopped by an antero-posterior tampon of iodoform gauze. In a case treated the same way two years ago, the turbinates are now covered with a normal, non-hypertrophic mucous membrane.

M. PAUL KOCH. *A Foreign Body in the Upper Air Passages.*

A boy, nine years old, was playing with his friends, with a bean in his mouth. Suddenly the bean disappeared, and the child had a violent attack of suffocation. When the doctor arrived, one hour later, the child was well and playing again. Auscultation gave negative results; it therefore seemed probable that the bean had been swallowed. This was on March 24th, at 9.30 a.m. The child remained well till the evening of the 25th, when fever, violent thirst, loss of appetite, and oppression over chest were complained of.

On 27th March the doctor, called in again, found the left half of thorax barely moving, dull all over on percussion; at left apex a very slight R.M., none over the rest of the lung. Right side of thorax normal. Tracheotomy proposed but refused. That evening another suffocative attack, during

which the foreign body could be felt moving up and down the trachea, and could be heard striking against the glottis.

On 30th March tracheotomy was performed. The wound, held open by retractors, permitted the bean to be coughed out. It was not at all decomposed, weighed 1·10 grammes, and measured 11 by 8 by 6 millimètres; therefore could not have been expectorated through the child's larynx.

It is unusual for a foreign body to enter the left bronchus.

As soon as the bean had been expectorated, the wound was united by a few sutures (no drainage) and a bandage round the neck. It healed by first intention.

M. LAMENT. *Temporary Resection of the Superior Maxillary in Extirpation of Naso-Pharyngeal Tumours.*

Temporary resection ought to be reserved for very large and specially for malignant tumours.

We have the choice of three routes—palatine, nasal, and facial.

The palatine route makes a laborious or even dangerous operation. There are three nasal methods (these were illustrated by preparations).

Of the facial operations, the chief are Langenbeck's (luxation of the maxillary inwards) and Fontan's (luxation outwards). Lastly, there is Kocher's subcutaneous resection of both maxillaries, which we consider the operation of the future.

MM. ROUSSEAU and HENNEBERT. *Antrectomy.*

After showing that nearly every author who has written on the operation of trephining the mastoid antrum has given some landmark as the only safe and reliable guide to the position of the antrum, the authors proceeded to demonstrate, on a large collection of temporal bones, that none of the guides were satisfactory.

The reason is very simple. All these landmarks are variable; each subject presents a temporal peculiar to himself, and not exactly resembling any other. Thus the temporal line, the squamo-petrous line, the spina supra-meatum, etc., were shown to be well marked, indistinctly indicated, or wanting, and to vary in size, position, etc. Now, considering how greatly the antrum may be reduced in size, for example, in sclerosed processes, it is indispensable to have at least one guide which shall be invariable in position and present in every case.

Having observed that the highest point of the spina supra-meatum (when present) and the highest point in the attachment of the membranous to the osseous meatus are always in the same horizontal plane, we concluded that the latter point must have some constant relation to the antrum, just as the spina has. To determine this we made a large number of sections of temporals, passing as exactly as possible through the middle of the tympanic cavity and antrum, then with a drill projected the outline of the antrum on to the external surface of the temporal bone; and we proved:—

(1) That a horizontal plane passing through the above-mentioned point of attachment passes through the floor of the aditus, and through the middle of the antrum.

(2) That the centre of the antrum is five millimètres behind the posterior wall of the osseous meatus. In other words: *a point five millimètres behind the posterior wall of the meatus, on a horizontal line drawn from the superior point of attachment of the membranous to the osseous meatus, corresponds exactly to the centre of the antrum.*

Therefore, having exposed the above-mentioned point of attachment, draw backwards from it a horizontal line, on this mark a point five millimètres behind the posterior wall of the osseous meatus; with this point as centre mark a circle of five millimètres radius; this is the "field of operation." A passage cut from this "field of operation" parallel to the osseous meatus will invariably reach the antrum. If the passage is cut perpendicular to the plane of the mastoid surface, it will almost certainly strike the lateral sinus. This is specially likely to happen in sclerosed processes, or in cases of malposition of the sinus.

In very young children, on account of the very small size of the field of operation, it is well to operate slightly in front of the above described position. In them, however, the removal of a very thin layer of bone opens the antrum. Except in sclerosed mastoids, after removing the first three or four millimètres of cortex, the antrum can be reached with the curette alone.

In cases with mastoid fistulæ we do not use these as guides to the antrum, but, starting from our landmark, work directly down to it, as already described.

The more serious operations on the ear are generally required for multiple lesions, located not only in the mastoid, but also and chiefly in the aditus, attic, and tympanic cavity. It is, therefore, necessary before proceeding to "antrectomy" to carry out some preliminary treatment—viz., extirpation of the membrane and ossicles and of polypi, curettage of the tympanum, etc., etc.

This should be done for two reasons:—(1) Operations in the tympanum are so delicate, requiring special illumination and special position of the patient, that they can hardly be satisfactorily carried out in the course of the larger and more serious mastoid operation. (2) This preliminary treatment will procure as thorough asepsis of the meatus and tympanum as possible. After this the results of the mastoid operation are most rapid and brilliant.

In carrying out the operations, an incision (right down to the bone) is to be made in the auriculo-mastoid groove, starting a little behind the ascending branch of the helix, following the groove to about its middle point, then continuing directly down to, but not beyond, the point of the mastoid process. The periosteum is then raised backwards very freely, and forwards as far as the meatus. The insertion of the cartilaginous into the osseous meatus must be freely exposed, both at the posterior and at the superior margins. In the latter position a strong fibrous band, about two to three millimètres broad, will be found. It arises from the depression above and behind the spina supra-meatum, and is lost in the membranous meatus. This must be cut through in order to expose the upper margin of the attachment of membranous to the osseous meatus, from which, as already described, our horizontal line is drawn.

The advantages of our landmark, as compared with all others, are that (1) it is exact ; (2) it is always present ; (3) it never varies.

RUTTEN. *Polypoid Growth on the Right Tonsil.*

This was a polypus, two and a half centimètres long, shaped like the uvula, growing from the surface of the right tonsil. There was no sign of suppuration past or present ; no cicatrices. The patient, aged twenty-six, discovered it by chance. He had suffered from time to time from slight sore throats. It was removed by galvano-cautery. No microscopical examination was made, but its naked-eye appearance, and the complete absence of secondary symptoms, such as pain or glandular swelling, led me to consider it a papilloma.

Afternoon Meeting.

Dr. BAYER was elected *President for the Year 1896-7.*

M. EEMAN. *Pseudo-Membranous Rhinitis and Nasal Diphtheria.*

Primary diphtheria of the nasal fossæ is comparatively common, at least amongst children. Clinical experience taught me to recognize as diphtheritic those cases commonly known as fibrinous or pseudo-membranous rhinitis. In my earlier cases no bacteriological examination was made, but since January, 1895, all my cases have been most carefully studied clinically and submitted to bacteriological examination in the laboratory of my learned colleague, M. van Ermengem, to whom, and to M. Sugg, I have to express my warmest thanks.

Eleven cases have been studied ; all were primary nasal diphtheria. Eight cases were pure diphtheria (long and short forms) ; in two there were Loeffler bacilli and strepto- and staphylococci ; in one, bacilli and diplococci. The age of the patients varied from seventeen months to eleven years. These were clinically the same as my previous cases, and, together with them, justify the assertion that fibrinous or pseudo-membranous rhinitis is nothing but primary diphtheria of the nose.

The history and surroundings of these affections very often indicate their diphtheritic nature. Thus, one case developed during a serious epidemic of diphtheria in a country district ; in a second, the little patient's brother had died a few months earlier from laryngeal diphtheria ; a third arose during a veritable home epidemic, three of my patient's brothers having suffered from pharyngo-laryngeal diphtheria ; in a fourth, my patient's mother travelled backward and forward between my patient and his brother, who had an attack of pharyngo-laryngeal diphtheria.

Post-operative fibrinous rhinitis is a secondary rhinitis of a completely different nature, and does not need to be considered here. Even this however, may not always be so simple as some suppose. Take, for example, the following : A child (on whom I had operated for purulent otitis media) suffered from nasal obstruction, due to a large polypus. One day the obstruction seemed more marked than usual. I examined

and found diphtheritic rhinitis of the right fossa (bacteriologically, pure diphtheria); two days later the left nasal fossa and the septum were invaded. This happened in June, 1895. Allowing a few weeks to elapse after the final disappearance of the membrane, I removed the polypus (September). Eight days later the patient returned with intense and widespread nasal diphtheria. This would naturally have been classified post-operative membranous rhinitis had one not known of the diphtheritic attack in June.

If the first microscopic examination gives a negative result, it must be repeated. For example, in Case 4 examination of the membranes gave a negative result, but examination of the secretions gave a positive result. Many of the cases recently published with negative results as regards diphtheria lose their importance because only one examination was made.

The disease is purely local, with the symptoms of an acute coryza, and not affecting the general health. Sometimes the symptoms are more like those of a foreign body in the nose, with muco-sanguinolent discharge.

It is this absence of effect on the general health that leads my confrères to doubt the diphtheritic nature of membranous rhinitis. But diphtheria of the pharynx can also be slight, with but little effect on the general condition. Do we not know latent diphtheria? Have we not sometimes to diagnose a past diphtheria from the presence of post-diphtheritic paralysis? This, which is only an occasional occurrence in diphtheria of the pharynx, etc., is the rule in nasal diphtheria. The disease remains local, but the germs are none the less virulent, as experiments on animals prove. The patients, therefore, able to go about their ordinary duties, are to be regarded as active agents in the spreading of diphtheria; and as such they must be treated not only till all trace of membrane has disappeared from the nose, but till repeated bacteriological investigations give constant negative results. Isolation and disinfection of all nasal discharges are the only methods to adopt.

M. BAYER thought that the rôle of the Loeffler bacillus was not yet established. There were certainly cases of non-diphtheritic membranous rhinitis; the diphtheritic cases, however, were the more numerous, but they accompanied or followed diphtheria of the pharynx, larynx, etc.; lastly, there were cases of latent diphtheritic pseudo-membranous rhinitis, generally remaining restricted to the nasal fossæ, but sometimes passing on to auto-infection. They are considered rare, because from their lack of serious symptoms they are not brought to the notice of rhinologists. As for prophylaxis, he thought M. Eeman was too severe. The child should be isolated from six to eight weeks.

M. DELSTANCHE had seen a good number of post-operative false membranes in the nose, and wondered how often Loeffler's bacillus might have been present. It would be interesting to examine the mucus from the noses of a large number of healthy children.

MM. WAGNER and BECO thought the question deserved more thorough investigation.

M. BAYER, who had formerly seen many cases of post-operative membranous rhinitis, had not had a single case since he commenced to use antiseptics.

M. GEVAERT cited a case from his own practice in which he had seen fibrinous rhinitis in a child cause diphtheria in others. The child, in a hospital where the isolation of diphtheria is deplorably defective, developed fibrinous rhinitis. Three days later her mother took her home. Seven days later the mother came to the hospital with diphtheria, and four days later the grandmother followed with the same condition. M. Gevaert completely agreed with M. Eeman's propositions.

M. BUYS quoted a case of a child who had had fibrinous diphtheritic rhinitis seven weeks, attending school, etc., all the time. The bacilli cultivated from the nose were very virulent even at that time—*i.e.*, seven weeks from onset of the disease. At the present time, although there was nothing to complain of but a slight nasal catarrh, Loeffler's bacilli were present.

In reply to M. Beco, M. EEMAN said he had only once used serum-therapy for such a case. Its effect was marvellous.

M. BOLAND had to report favourably on two cases so treated.

M. NOQUET had seen very few of these cases. He thought it probable that one could frequently find the bacillus in apparently perfectly normal noses, just as one found it in the mouth of healthy people.

M. EEMAN replied.

Arthur J. Hutchison (Trans.).

(To be continued.)

DUTCH SOCIETY OF LARYNGOLOGY, RHINOLOGY, AND OTOTOLOGY.

Fourth Meeting, Utrecht, May 17th, 1896.

President—Prof. GUYE (Amsterdam).

Dr. HUYSMAN. *Case of Perforation of the Anterior Faucial Pillars.*

The patient, a man, aged twenty, had scarlatina as a child, and has chronic perforation of the tympanic membranes as a result. Nevertheless, Huysman considers the case as a congenital malformation on account of the symmetrical position of the oval perforations.

Dr. M. BOLT. *On Percussion of the Mastoid Process.*

In two cases of acute inflammation of the middle ear, where perforation of the tympanum did not follow spontaneously, Bolt found a dull tone on percussion of the mastoid process, and on that account suggested mastoid operation, which was not permitted. After paracentesis of the tympanum both cases healed completely.

Dr. GUYE. *Demonstration of a Case of Radical Operation for Cholesteatoma.*

The patient, a schoolmaster, thirty-nine years old, had been operated on by Guye twenty years ago—in 1875—on account of purulent otitis, with polypi and abscess on the mastoid process. He saw him again in 1888,

thirteen years after the first treatment. He had been well for six years, but since that time he had suffered from headache and neurasthenia, and had twice been under hydropathic treatment without benefit. Now he had again otorrhœa and earache. Some granulations were removed, and also fetid caseous pus from the tympanum and antrum, and the tympanum syringed out from the Eustachian tube. This was repeated a few times; after which the patient was quite well for a year. He returned in 1889, and in 1890, with a slight recurrence. From 1890 to 1896 the patient was quite well, syringing his ear once a month with a one per cent. sublimate solution, without having any otorrhœa or earache all that time. On March 21st of this year he again returned with earache and otorrhœa.

Guye removed a quantity of epidermoid substance, and found in the posterior wall of the meatus a perforation from which also a mass of epidermis was removed. Three weeks later, on April 6th, the patient returned. He had had influenza, and after that earache and otorrhœa, and swelling behind the ear. On April 18th there was an abscess above the meatus. Next day Guye operated, and found a large antrum filled with pus and cholesteatoma. When this was removed one could see the air coming through the aditus and antrum as the patient performed Valsalva's experiment. Guye resolved to keep a permanent opening of the antrum, and to this effect he inserted, two days after the operation, a caoutchouc tube into the antrum, twelve millimètres thick and three centimètres in length, cut so that it rested with two points on the posterior wall of the antrum; and, besides that, he passed a piece of iodoform gauze through the posterior wall of the meatus, and through the wound, intending by this means to keep open the perforation of the posterior wall of the meatus, which had been enlarged during the operation. The drain has had to be shortened since the operation; it measures now two centimètres. The patient is still able to blow the air freely both through the antrum and through the ear. Guye's aim is to see the canal coated with epidermis, which will take a couple of months; after which time he will replace the tube by iodoform gauze, and keep the canal as dry as possible. Guye showed to the Society four years ago a patient on whom he had operated by the same method, and this patient has now had for eight years these two permanent perforations—one into the posterior wall of the meatus, and one in the mastoid opposite the antrum. During these eight years this patient has made no complaints at all about his ear; he only now and then wishes to have the opening closed—a wish which, of course, will not be fulfilled, because it would sooner or later bring about a renewal of the previous condition.

Dr. MOLL: Why not prevent the closing of the opening by a plastic operation?

Dr. GUYE: I am very satisfied with the result of the drain.

Dr. BOLT: I cannot approve of the daily syringing, as the aim is to get the canal dry.

Dr. GUYE: Syringing is the only way for the patient to keep the canal clean. Of course, it is only kept wet for a short time.

Dr. BRAAT: In the depth of the wound there are still granulations.

Dr. GUYE: The operation was made only four weeks ago. The patient is not quite cured yet.

Dr. REINHARD: I am glad to see that you also make a permanent opening in the antrum for cholesteatoma. Even after doing this one sometimes sees a relapse, but far less often than formerly.

Dr. MOLL. *Demonstration of a Case of Trephining of the Mastoid Process.*

This case was that of a man of thirty who had had otorrhœa in his youth, and had suffered now for two years from intense headache. He had a slight otorrhœa, with swelling and tenderness of the meatus and mastoid process. An incision had been made in the meatus without result. Moll opened the antrum with gouge and mallet, removed a quantity of caseous matter, and tried to keep the wound open and to cover it with epidermis by transplantation. There was still in the depth of the wound a bony bridge under which one could pass a sound. It looked like a semicircular canal, but neither Dr. Moll nor any of the present members thought it probable that it was. Result: No more headache and the general condition of the patient very satisfactory.

Dr. REINHARD (Duisburg). *Demonstration of a Patient with a Deep Abscess in the Neck after Otitis Media Purulenta.*

This was a case of a deep abscess in the neck as a sequel of otitis media purulenta. It was remarkable that the otitis was healed before the abscess developed. Reinhard opened the mastoid on March 28th, and removed a fair quantity of non-fœtid pus. He had to open the abscess again on April 23rd and on May 11th. Even now the abscess is not healed, and the infiltration in the neighbourhood is still very hard.

Dr. TEN SIETHOFF asked if the pus had been examined microscopically. The hard infiltration makes him suspect that it may be a case of actinomycosis. He relates a case seen by him a year ago, where there was otorrhœa and hard painful swelling around the mastoid process. He found actinomyces in the pus, and gave iodide of potassium (two grammes every day) internally, with the result that after four weeks the patient was cured with practically no local treatment.

During the course of the meeting Dr. Ten Siethoff, with the permission of Dr. Reinhard, examined microscopically some of the pus, and demonstrated to the members the characteristic elements of actinomycosis.

Dr. W. VAN DER HEIDE. *Demonstration of Polypi of the Choanæ, and of some Foreign Bodies removed from the Nose.*

Van der Heide showed four large polypi removed from the choanæ by the cold snare. One of them was a cysto-fibroma. Three were removed through the nose; one, on account of division of the pedicle, by the mouth. He also showed a revolver bullet which had been shot by a man attempting suicide through the inner corner of the eye. No trace of the bullet was found in the wound, nor in an abscess which formed there. After a few weeks the left nostril was found blocked up with fœtid discharge. Between the middle turbinated and the septum Van der

Heide found resistance on probing. He then with a curved forceps removed the bullet, which was very disfigured. A few days after that he removed a piece of bone, and the patient recovered.

He then showed a *myriapod* which had crept into the nose of a boy of eight years when sleeping in a wood. The boy had severe headache and pricking sensations in the nose. Van der Heide removed adenoids, and a week after that the patient returned and brought a conglomeration of mucus, which he had removed by injections into the nose, and which was making very lively movements. In washing this mucus Van der Heide found a myriapod, which was verified by a zoologist, Dr. P. P. C. Hoek, as a specimen of *Arthronomalus similis*.

Dr. A. SIKKEL. *Demonstration of Plaster Casts of the Upper Jaw in Patients with Adenoids.*

These casts show the peculiar changes described in 1891 by Körner, and which, according to Sikkel, are not the same when the nasal obstruction has set in during the first and during the second dentition. In the first case the hard palate is found very high; the upper jaw is narrow and long. In the second instance these changes are more prominent still, and, besides this, the central incisors stand at an angle and turn their lingual plane towards each other. The lateral incisors also suffer under the nasal obstruction; sometimes one is found malformed and the other is absent. It is desirable that dentists should pay attention to the fact that often the irregular growth of the teeth is the result of changes in the upper jaw produced by nasal obstruction.

Dr. HUYSMAN. *On the Treatment of Otitis Media Serosa and Purulenta.*

Huysman recalls the fact that he has advocated the dry treatment of middle-ear disease since 1891. The bacteriological and other experiences published since by Gradenigo and others have confirmed his views. He believes that some mastoid complications are caused by the treatment.

MOLL acts on the same principles in acute cases. In chronic cases he does not think that it is always sufficient.

Dr. VAN DER HEIDE is of opinion that the dry treatment may be sufficient in a clinic, but in a polyclinic, or in cases where you cannot see the patient regularly, you cannot do without irrigations.

Prof. PEL: The same question about dry treatment rises after operation of empyema of the thorax. Formerly it was usual to irrigate the pleural cavity, but often fever and complications followed. With the dry treatment the results are much better. The analogy, therefore, would plead for dry treatment of middle ear inflammation.

Dr. ZWAARDEMAKER observed that the two cases are not the same. We do not irrigate the tympanum, only the meatus—which would be analogous to keeping clean the neighbourhood of the wound in the thorax.

Dr. SIKKEL cannot do without the syringe. In the dry treatment some pus must often be left in the depth of the meatus.

Dr. BURGER and Dr. GUYE expressed much the same opinion.

Dr. H. BURGER. *A Case of Radical Operation with persistent Opening for Cholesteatoma.*

The patient, a man of twenty-seven years, came under treatment four years ago with an old fetid right otorrhœa, which had lasted since his thirteenth year, and he also suffered with much giddiness and headache. A quantity of cholesteatomatous matter was removed. Part of the upper and posterior wall of the meatus was gone. This opening led to a large cavity in the mastoid, from which also fetid matter was removed. The giddiness and headache disappearing, the patient left off the treatment. Three years later, in December, 1895, he returned. He had been well for more than two years, and now for half a year again suffered from giddiness and headache. Once he had an attack with lipothymia, diplopia, and convulsions. On December 24th he was operated on, the rest of the bony posterior wall of the meatus was removed, and the wound was coated by a plastic operation, after the method of Stacke-Jansen. On March 5th the whole wound was coated with epidermis, and there was no trace of secretion. The general health was very good, and the patient said his memory, which had been feeble for the last years, was much better. Hearing power for whispered voice had improved from 0.50 mètre to 2.50 mètres.

Dr. REINHARD : I think the fact that the Eustachian tube is quite closed very remarkable. I hear from Dr. Burger that this has not been obtained on purpose. I have often tried in the operation to bring about that closing of the tube by curettement, or by cauterization, but always without success. I consider it to be a very happy circumstance.

Prof. GUYE : In my opinion it is better that the Eustachian tube remains open, in view of the normal ventilation of the tympanum.

Dr. BURGER : I consider, with Dr. Reinhard, the closure as an advantage, principally in cases of cholesteatoma, where often a relapse is occasioned by infection through the Eustachian tube. The ventilation through the tube has no importance after a radical operation, where the tympanic membrane and the posterior wall of the meatus are removed.

Dr. H. VAN ANROOY. *A Papilloma of the Larynx, discovered by means of Kirstein's Autoscope.*

The case was that of a child, three years of age, which, after having had measles and whooping cough, had become hoarse and dyspnoïc. As laryngoscopical examination was very difficult to perform, Van Anrooy tried the autoscope of Kirstein in narcosis, and was able to find large multiple papillomata in connection with the right vocal cord. The growths were removed on April 29th, by Dr. van der Hoeven, by means of laryngofissure, as Dr. van Anrooy did not think this a fit case for endo-laryngeal operation. He was well satisfied with the aid to the diagnosis given him by the autoscope of Kirstein.

Dr. Anrooy also showed a hard round wood splinter of two centimètres in length, which he removed with Mackenzie's forceps from a larynx, where it was impacted beneath the left vocal cord, between the regio interarytenoidea and the lateral wall of the larynx. By traction

with the forceps the splinter was broken, took the form of a V, and was then easily extracted.

Dr. ZWAARDEMAKER. *Paracusis Willisii.*

After a critical review of the various interpretations of this symptom, Dr. Zwaardemaker, in analyzing the symptom itself, comes to the conclusion that in these patients the absolute perception of sounds is diminished, but the relative or differential perception is as good or even better than normal. He has made experiments in this direction by means of the harmonica of Urbantschitsch, and has found his hypothesis confirmed. He intends to publish his experiences separately.

Dr. BOLT. *On Treatment of Chronic Purulent Middle Ear Disease, with high-placed Perforations, by Styron.*

Dr. Bolt has made a trial with styron, as recommended by Spalden some time ago. Styron is composed of styrax and balsam Peruv. ãã. He makes use of an alcoholic solution containing five per cent. of styron, and has seen very good results from its use.

Dr. BRONDGEEST. *On the Surgical Treatment of Lupus and Tuberculosis of the Larynx.*

As a sequel to his formerly published cases, he related two new cases of far-advanced secondary lupus of the larynx, in which surgical treatment, laryngotomy, extirpation of the epiglottis after pharyngotomy, and destruction of the lupous or tuberculous tissue by the thermo-cautery, was applied. One of the cases was cured; in the other the larynx was getting on very well, but the patient died of acute pulmonary tuberculosis.

Guye.

VIENNA SOCIETY OF LARYNGOLOGY.

January 9th, 1896.

President—Prof. STOERK.

SCHEFF. *Fracture of the Laryngeal Cartilage, and Presentation of a Specimen.*

Isolated fractures of the cricoid cartilage are rare. Specimen shown was from a healthy man, aged twenty-four, who had received a blow on the neck. The face, the neck, the upper limbs as far as the articulations of the hands, and the trunk down to the scrotum, were infiltrated with air in the subcutaneous cellular tissue. Respiration was very embarrassed, air penetrating under the skin at each expiration. There was no time to lose, and after various unsuccessful attempts to introduce a catheter, the author decided to open the air passages. The patient succumbed. At the autopsy a fracture of the cricoid cartilage was recognized.

Scheff then proceeded to make a communication based on experiments made on twenty cadavers. Reviewing the literature of the subject, he referred to cutaneous emphysema as the most marked symptom.

Crepitation cannot be considered characteristic, for it may be produced from the lateral inclination of the normal larynx by the friction of the superior cornua of the thyroid cartilage, and the great cornu of the hyoid bone over the cervical column. Having explained his experiment in detail, Scheff, in conclusion, stated that his results agreed with those of Cavasse, Keiller, and Gurlt, in so far that fractures of thyroid are more frequent than those of the cricoid cartilage, and that the latter are rarely isolated, being oftenest associated with fractures of the thyroid. Both the author and other experimenters have observed that the arytenoid cartilages, and especially the vocal cords, may participate in laryngeal traumatism. Age, that is, the degree of ossification, influences fracture of the larynx. Sometimes the ossified cartilages of middle age are fractured more easily than the non-ossified cartilages of youth. The greatest resistance is offered by cartilages entirely ossified, such as are found commonly in aged people.

STOERK remarked that in most cases of laryngeal fracture crepitation is but little discernible, in consequence of the pronounced tumefaction of the soft parts, and it cannot, therefore, be regarded as a symptom of importance.

HAJEK related a case of descending fracture of the thyroid cartilage to the right of the thyroid angle. Apart from cough the patient ejected a few drops of blood, and suffered from nothing except hoarseness, so that he sought advice only four weeks after the accident. The fracture was easily detected; the right vocal cord was thickened at its anterior extremity. It is rare to observe a fracture of the laryngeal cartilages so painless.

Hajek replied to Stoerk that in his case crepitation was clearly perceived. There also existed the signs indicated by Stoerk, absorption of the hæmorrhagic infiltration subsequent to the fracture; moreover, the thyroid cartilage was partly ossified.

WEIL showed a woman, twenty-four years of age, who since March, 1895, had suffered from *Fætid Suppuration of the Right Antrum of Highmore*, consequent upon influenza. On the 8th December, after electric transillumination had furnished a positive result, irrigations were made through the inferior meatus, which gave issue to masses of fætid caseous pus. Subsequently, every-day irrigation was practised through the maxillary sinus. The fifth application was followed by the issue of a plug of muco-pus. The seventh was followed by a little clear pus, and then nothing more. There was also extensive caries of the superior first molar, and a fistula, which scarcely suppurred again after cleansing of the dentary canal and filling of the tooth. Weil reserved his remarks upon the surprising rapidity of this cure. *R. N. Wolfenden (Trans.)*.

BERLIN LARYNGOLOGICAL SOCIETY.

Meeting, November 8th, 1895. (Reported by Dr. EDMUND MEYER.)

DEMME showed :—(1) A patient with a *Deep Furrow in the Left Tonsil*. (2) A boy, aged thirteen, with *Paralysis of the Left Recurrent* resulting from a fall on a pail. Demme considered the paralysis due to the pressure caused by an extravasation of blood (there was a slight thickening over the cricoid), and, therefore, employed massage, which effected an improvement.

GLUCK has performed *Laryngotomy* fifteen times for tumours. The cases of papilloma were cured without exception. Of two sarcomas, one was cured, while the canula cannot be removed from the other. One case of carcinoma was cured. Of two in which tracheotomy was performed, one died five weeks afterwards of inanition.

B. FRANKEL saw papillomata recur very soon in the case of a child in whom laryngotomy had been performed, the growths leading to complete stenosis of the larynx. Fränkel attributes pneumonia after extirpation of the larynx to injury to the superior laryngeal nerve.

P. HEYMANN has also seen recurrence of papillomata after laryngotomy.

ALEXANDER demonstrated a patient with a *Sarcoma of the Base of the Skull*, which filled the right half of the naso-pharynx, and had caused paralysis of the facial and paresis of the soft palate on the right side. After being three weeks under observation, the surgeon having declined to operate, the patient was put on arsenic. Under this treatment all the symptoms quickly improved.

P. HEYMANN reported a similar case.

SCHÜTZ saw no success follow the use of arsenic in three cases.

B. FRANKEL emphasized the fact that one can never know beforehand whether the arsenic will be effectual. In two cases he saw a brilliant result follow the arsenic treatment.

GLUCK also referred to two cases successfully treated by arsenic.

E. MEYER showed two tubes containing *Serous Fluid Aspirated from the Antrum of Highmore*. On opening the cavity it was found empty; from the wall hung shreds of mucous membrane, which probably represented a collapsed cyst.

F. MEYER. *Bacteriological Examination of Angina Lacunaris*. In the examination of the secretion of non-inflamed tonsils Meyer usually found a coccus very similar to the streptococcus pyogenes, a smaller micro-organism, often arranged as a diplococcus, staphylococci, and leptothrix. In angina, in addition to these, pathogenic bacteria were also found. In fifty-five cases examined, staphylococci—usually staphylococcus aureus—were found in fourteen; staphylococci and streptococci were mixed in twenty-four; and in fifteen cases there was a pure culture of streptococcus. Meyer regards the latter as the exciting cause of the angina. Its absence in so many cases is explained by its sensitiveness to the reaction of the nutrient medium. After he used agar, which had proved suitable for

streptococci, their growth never failed. If, in the first hours of an angina, only staphylococci are found, this may be due to the immigration of the streptococci into the mucous membrane and to the more rapid growth of the staphylococci. Meyer could not make out any difference between the course of streptococcal and staphylococcal angina. He found no pneumococci in the latter, although diplococci were frequently observed. Loeffler's diphtheria bacillus, in its full virulence, was present on two occasions.

Meeting, 29th November, 1895.

B. FRANKEL showed (1) Preparation of a *Carcinoma of the Anterior Wall of the Pharynx*, extending to the thyroid cartilage, and involving the muscles. (2) Preparation of the larynx from a patient aged forty. The left vocal cord was in the cadaveric position: the recurrent paralysis was primarily attributed to a struma. The latter became smaller under thyroidin treatment, although difficulty in swallowing set in. Some time later a prominence appeared beneath the left vocal cord, which was covered by normal mucous membrane. Death from cachexia. The *post-mortem* examination revealed a carcinoma of the upper part of the œsophagus, which had caused a perichondritis of the cricoid cartilage.

P. HEYMANN reported two cases in which the arsenic treatment had exercised a beneficial influence on *Sarcomas*. (1) Man, who for several years had had increasing difficulty in swallowing. Tonsils greatly enlarged. Microscopically, small-celled sarcoma. (2) Eight years ago pain on swallowing. Removal of a tumour from the pharynx. Since then, recurrence every autumn, and removal by operation. Three years ago pharyngotomy (Von Bergmann) for recurrence. Two years later recurrence involving the whole left half of the pharynx. Under arsenic the tumour diminished. In three other cases, Heymann obtained an improvement by arsenic, while in five or six cases it failed.

TREITEL demonstrated a *Modified Ring Knife for Operating on Adenoid Vegetations*.

FLATAU condemned the instrument because of the ease with which it might cause injury.

E. MEYER showed *Microscopical Preparations* from the case reported at the last meeting, in which serous fluid was removed from the antrum. The examination showed a cystic mucous polypus.

E. MEYER. *Autoscopy and Œsophagoscopy*. Meyer gave his opinion as to the value of Kirstein's autoscopy from his experience in three hundred cases. In 8·3 per cent. he obtained a complete view of the larynx and trachea, in 10 per cent. the larynx, excepting the anterior commissure, in 22 per cent. the posterior two-thirds of the larynx, in 19·3 per cent. the posterior half, in 8·3 per cent. the posterior wall of the larynx, in 17·6 per cent. the summit of the arytenoid, and in 13·6 per cent. autoscopy was not practicable. Women appear to be somewhat more suited for the method than men: the age is of no importance. The contra-indications

are : hyperæsthesia of the base of the tongue, or ulcerative processes in this region, grave disturbances of the circulation, and marked tracheal and laryngeal stenosis. Further, the method is not available for the diagnosis of the motor disturbances of the vocal cord. The complaints of the patients varied, the pressure of the autoscope was usually felt to be exceedingly annoying, and sometimes even painful. Meyer found that autoscopy was of considerable advantage in the examination of the posterior wall of the larynx and trachea, but he did not think that it facilitated endolaryngeal operations much ; only operative measures on the posterior wall of the larynx were more easily carried out. For demonstration purposes he could not find autoscopy of any special value.

Rosenheim's œsophagoscopy is practicable in all cases. By this method the œsophagus, which has hitherto been hidden from our view, is made accessible to direct examination and local treatment.

KIRSTEIN did not find it necessary to use any force in practising autoscopy. He regarded the autoscope, not as indispensable, but as possessing considerable advantages. The method marked an advance, especially in endolaryngeal and endotracheal surgery.

E. MEYER did not see wherein the operative technique was simplified by autoscopy.

TH. FLATAU. *Rhinological Communications.* (1) Girl, aged five, suffered for a long time from nasal obstruction, which persisted in spite of the removal of adenoid vegetations. The examination showed the remains of adenoids ; in both nasal cavities œdematous masses, granulations, and fetid pus. On probing, there was the feeling of bare bone. After removal of the granulations a foreign body was seen which had perforated the septum. The calculus, which had formed around a fruit stone, consisted of phosphate of calcium, traces of oxide of iron, and carbonate of magnesia. (2) In the treatment of empyema of the antrum of Highmore, Flatau recommends the opening to be made from the canine fossa with a punch-like chisel. He does not prolong the use of tampons, but drains the cavity by means of an aural speculum slit in the middle.

Meeting, 20th December, 1895.

FLATAU demonstrated a patient in whom an *Empyema of the Antrum of Highmore* had produced vertigo, partial loss of memory, ill-temper, lancinating pains in the left arm, foul-smelling nasal suppuration, and necrosis of the lateral wall of the nose. After opening the antrum, and curetting it, all the symptoms passed off.

KUTTNER thought that syphilis must be regarded as the cause of the affection, because of the severity of the general symptoms—the pains in the left arm—and chiefly on account of the formation of a sequestrum.

FLATAU once saw a similar sequestrum form in influenza, without syphilis.

E. MEYER showed a patient, a view of whose larynx could be obtained with extraordinary ease by simply depressing the tongue. He mentioned,

also, that in a patient in whom laryngoscopy presented great difficulties on account of the very fleshy tongue, autotomy yielded a good view of the larynx.

G. LEWIN demonstrated (1) a patient who contracted syphilis four years ago, and now presented an *Ulceration with Grape-like Excrescences at the Point of the Tongue* which Lewin did not regard as specific.

LANDGRAF was inclined to look upon the process as a syphilitic ulcer surrounded by granulations.

LEWIN found the tumour formation so considerable that he would not care to attribute it to the ulcer. The microscopic examination would settle the matter. (2) *Syphilitic Patient with Swollen and Ecchymosed Vocal Cord*, on which a small tumour was seated anteriorly. Lewin regarded the growth as a syphilitic nodule.

LANDGRAF asked whether he had not to deal with a gumma.

SCHÖTZ thought that the redness was not so much due to the tumour as to mechanical irritation (cough, etc.). The tumour appeared to him to be a cyst.

LEWIN was of the opinion that a cyst would be more translucent: besides, the tumour had diminished under antisymphilitic treatment. (3) *Patient with Slight Atrophy of the Base of the Tongue*, and *Patient with Gummatus Infiltration of the Epiglottis*.

B. FRANKEL pointed out that the last patient presented the rolling forward of the epiglottis which Hansemann has described as characteristic of syphilis.

E. MEYER showed the *Larynx and Trachea* of the patient he had demonstrated in the Society on 15th July, 1892. There was compression and rotation of the trachea by a struma which had grown into the latter. The *post-mortem* examination of the patient, who died of suffocation on 20th December, 1895, showed:—The upper part of the trachea deviated to the left: on its right wall a strumous nodule, which has perforated the wall, and is visible in the lumen as a tumour the breadth of the thumb. By a nodule on the left side, at the same height, the trachea is so compressed from the left, also, that almost no lumen remains. In addition, several fluctuating nodules are seated on the trachea. Microscopic sections prove that the growth is benign. An operation was not advised by the surgeon, as the struma descended far behind the sternum.

A. B. Kelly (Trans.).

(To be continued.)

ABSTRACTS.

DIPHTHERIA, &c.

Report of the American Pediatric Society's Collective Investigation into the Use of Antitoxin in the Treatment of Diphtheria in Private Practice. "Med. Record," July 4, 1896.

A CIRCULAR-LETTER was issued by the above society to practitioners in North America, asking for detailed information as to the use of antitoxin in diphtheria in private practice. Replies were received from 615 physicians (with 3628 cases) in fifteen different states, in the district of Columbia, and in Canada. In making up the statistics and report certain cases were neglected, because the diagnosis for various reasons seemed doubtful. Reports of private cases were also obtained from the Boards of Health of New York and Chicago. The grand total gives 5794 cases, with 713 deaths—a mortality of 12·3 per cent. If cases moribund or dying within twenty-four hours of the first injection are deducted, the mortality is reduced to 8·8 per cent. The advantages of early injection are very strikingly demonstrated, thus:—

PERCENTAGE MORTALITY.

	Injected on 1st day.	2nd day.	3rd day.	4th day.	5th day, or after.
Committee's Report ...	4·9 ...	8·3 ...	12·7 ...	22·9 ...	38·9
New York Health Board ...	8·7 ...	12·0 ...	16·0 ...	20·9 ...	29·0
Chicago	0·0 ...	1·5 ...	2·7 ...	14·1 ...	34·0

Thus the mortality per cent. of all cases injected during the first three days was only 7·3; deducting those moribund, or that died within twenty-four hours from the first injection, the mortality is 4·8 per cent.

The age table is much in accordance with ordinary experience, showing that the danger decreases with advancing age. Over fifteen years old there were 359 cases, with only thirteen deaths. The majority of these were either septic cases, or had already cardiac or kidney lesions. Omitting four moribund cases, the percentage mortality is reduced to 2·5.

It is difficult to judge from the returns what influence (if any) antitoxin has in preventing paralytic sequelæ. If it has any such effect, it is only when given at the very onset of the disease.

With regard to sepsis and nephritis the reports are unsatisfactory, different men calling different conditions by the same name; but there is very little evidence to show that nephritis was caused in any case by the serum.

Broncho-pneumonia occurred in only 5·9 per cent. of the cases.

Of laryngeal cases, one-half recovered without operation, although in a large proportion the stenosis was severe; and in cases intubated the mortality was only 25·0 per cent.

Only three cases are reported in which unfavourable symptoms were attributed to the serum, and of these only one (viz., the girl Valentine, who died in convulsions ten minutes after receiving the injection) is clearly proved to be due to the serum.

Arthur J. Hutchison.

Diphtheria Treated with and without Antitoxin. "Med. Record," June 30, 1896.

FIVE papers on the antitoxin treatment of diphtheria :—

1. **Winters, Joseph E.**—*Clinical Observations upon the Use of Antitoxin in Diphtheria ; and a Report of a Personal Investigation of this Treatment in the Principal Fever Hospitals of Europe during the Summer of 1895.*
2. **Thomson, W. H.**—*How the Facts about the Antitoxin Treatment of Diphtheria should be Estimated.*
3. **Brannan, John Winters.**—*A Critical Analysis of Dr. Winters' Clinical Observations on the Antitoxin Treatment of Diphtheria.*
4. **Stowell, W. L.**—*Diphtheria with and without Antitoxin.*
5. **Ernst, F. H.**—*Personal Experience in the Treatment of Diphtheria with and without Antitoxin.*

The first of these papers is a violent attack on the use of antitoxin on both theoretical and statistical grounds.

The bacillus is not destroyed, is not rendered less virulent, is in no way affected by the antitoxin. Antitoxin is supposed to be an antidote to the bacillary toxins, but to have no influence on the toxins of other bacteria ; thus its scope is at once greatly restricted because pure bacillary infection is rare. The duty of the antitoxin is or ought to be to prevent cardiac depression, cardiac paralysis, albuminuria, and post-diphtheritic paralysis, all of which are due to the toxins of Loeffler's bacillus. Has it done so ? Behring states that to obtain the maximum result the antitoxin should be applied at the same time and at the same spot (Ruffer) as the toxin. This is impossible in man. "Another consideration of prime importance is : if we are to attribute the reported decrease of mortality of diphtheria to the action of a specific, this decrease must be uniform and constant. There must be the same reduction of mortality in all parts of the world where the remedy is applied.

"The most misleading part of antitoxin literature is the constantly quoted percentage mortality. The mortality from diphtheria in the city of Boston in 1895 was 14·48 per cent. ; in 1893, 32·49 per cent. ; and yet there were one hundred and twelve more deaths from diphtheria in the city of Boston in 1895 than there were in 1893."

The author next proceeds to deal with the results obtained at the Willard Parker Hospital during the first nine months of 1895, quoting shortly cases in which the treatment was begun early in the disease, and summing up thus :— "Not one item in the clinical records can be found to indicate that any one of these patients was in any way benefited by the antitoxin. This is particularly noticeable in the laryngeal cases. . . . There are clinical features here recorded which are due to the treatment, and not to the disease. These features are referable to the kidneys, nervous centres, temperature, and respiratory organs."

The next part of the paper is devoted to the injurious effects of antitoxin, used either as a curative or prophylactic agent, large numbers of cases (both from hospital and private practice) being quoted in support of the author's opinion that antitoxin is utterly bad.

The popularity of antitoxin is due largely to the results obtained at the Empress Frederika Hospital (Baginsky), Berlin, and at the Hospital for Sick Children in Paris (Roux and Martin). The methods of obtaining these results do not stand close investigation. Then, probably, we have just been passing through a period of mild diphtheria, and certainly "include many cases which previously (*i.e.*, before bacteriological diagnosis) were not considered as cases of diphtheria."

Dr. P. H. Ernst treated seventy-seven cases of diphtheria since May, 1895; twelve with and sixty-five without antitoxin. Of the twelve treated with antitoxin, five recovered, seven died. Mortality, over fifty-eight per cent. Of those treated without antitoxin, eleven died. Mortality, seventeen per cent.

The author concludes thus:—"When I began the use of antitoxin I had implicit faith in its remedial effects, but careful observation of the cases just enumerated convinced me that antitoxin does not exert the slightest favourable influence on the course of diphtheria. In fact, it is my opinion that the antitoxin patients who recovered had a more protracted convalescence, the anæmia specially being more marked and less amenable to treatment than in those who recovered without antitoxin."

Dr. William L. Stowell's paper, a review of his own cases and partly of the literature of the same period, is also unfavourable to antitoxin. He is convinced—

"That diphtheria is very variable in extent and severity, both epidemically and clinically.

"That the diagnosis of true or false diphtheria requires as much care bacteriologically as clinically.

"That the unusual number of cases recorded is in part due to bacterial cases without symptoms and the general alertness of physicians now to report suspicious cases.

"That the same causes, plus elimination, give the apparently low ratio of deaths." (This refers to the fact that many physicians use antitoxin for mild and moderate cases of diphtheria, but refuse it to very severe or moribund cases.)

"That cleanliness and ventilation will immunize as well as hypodermic serum.

"Diphtheria is a treacherous disease under any treatment. Selected cases and faithful treatment of any reasonable kind lead to success. Jules Simon was correct in saying, 'Efficiency of remedy not only, but fidelity in its use, give results.'"

Dr. W. H. Thomson's paper, after dealing with the difficulties and grounds for doubt in forming an opinion as to the value of antitoxin, shows that no individual's experience or opinions, however loudly he may express them—nothing but the experience of the whole of the medical profession throughout the world—should influence us in favour of or against antitoxin. From the published hospital statistics of practically the whole civilized world he proves quite clearly (as clearly as the above quoted papers disprove it) that antitoxin is the best treatment yet devised for diphtheria. He does not claim that antitoxin is a specific, because "there are no specifics;" but antitoxin treatment of diphtheria has reduced the death rate, so far as hospital experience goes, by fully fifty per cent.

J. W. Brannan's paper is a reply to that of Dr. Winters', first analysing, and in most cases proving the incorrectness and misleading nature of, his statements with regard to the Willard Parker Hospital results, then showing up the one-sided nature of his personal European investigation.

Dr. Winters, in citing cases from the hospital, uses a formula somewhat as follows:—"Patient, M. C.; one day sick; small bit of membrane on the tonsil; favourable prognosis; antitoxin injected; death on the fourteenth day." It ought to have been: "M. C., two years old; two days sick. No membrane visible, marked croup, retraction of chest, cyanosis. Intubation required. Prognosis doubtful. Antitoxin injected. Death on fourteenth day. Broncho-pneumonia on autopsy," etc.

One case—"J. L., thirty-two years old; three days sick; intoxicated on admission, with marked tremor"—is cited to show a type of case in which antitoxin should not be used.

“Dr. Winters insists that we should study the fatal cases, not those that result in recovery. Therefore he has not told you that for every eight first-day cases that died, ninety-two recovered; for every twenty-four second-day cases that died, seventy-six recovered; for every twenty-seven third-day cases that died, seventy-three recovered.”

Dr. Brannan shows from the hospital books that with antitoxin less alcohol is used per head than before antitoxin was introduced, contrary to the statement of Dr. Winters. The broncho-pneumonia observed has been of the usual type: suppression of urine has occurred with about the usual frequency, and has generally been relieved by local applications and diuretics. Albuminuria has been observed more frequently: but the urine has been more carefully and systematically examined. Cardiac weakness has not been more frequent, and post-diphtheritic paralysis (excepting temporary paresis of the palatal muscles) has been noteworthy by its absence.

The rest of Dr. Winters' evidence is similarly disposed of, special stress being laid on the complete absence of *post-mortem* findings in his reports.

As for his European investigation, it is shown that his authorities are either recognized opponents of antitoxin, or young men who never had any experience of diphtheria in pre-antitoxin days, and whose opinions are therefore of little or no value.

Arthur J. Hutchison.

Coakley, C. G.—*Statistics of Diphtheria*. “Med. Record,” June 6, 1896.

THIS is an examination (with tables) of the diphtheria statistics of Boston, New York, and Brooklyn from 1880 to 1895, also of those of the Boston City Hospital and the Willard Parker Hospital, with a view to estimating the value of the antitoxin treatment. Two sources of error have to be allowed for in treating municipal statistics. (1) The neglect to report cases. The busy practitioner will generally report his severe, and specially his fatal, cases, but will often forget to report the mild cases. (2) The variation in character or type of the disease from year to year.

A very marked increase in the number of cases reported took place in each of the three cities in the year in which these cities provided public laboratories for bacteriological investigation of the cases.

Contrasting “percentage mortality” with “number dying per 10,000 inhabitants” in Boston some interesting discrepancies appear. Thus, between 1886 and 1887 there occurred a rise of 2·5 in percentage, but a fall of 0·5 dying per 10,000 inhabitants; again, between 1888 and 1889 a fall of over two in percentage, with a rise of nearly two dying per 10,000 inhabitants: again between 1893 and 1894 a fall in percentage of nearly 5·5 and a rise of 6·7 dying per 10,000 inhabitants. The introduction of bacteriological examination of cultures from the throat, begun in 1894, was the means of discovering many mild cases, and thus increasing the total of cases; and as the patients in these cases mostly recovered the death rate was reduced. In 1895, when antitoxin treatment was used, there was a further very marked fall in the percentage mortality—12·5 of a fall, accompanied by a fall of about five in the number dying per 10,000 inhabitants. Such sudden falls in the number dying per 10,000 have occurred several times in other years, so that one cannot right away give the credit for this reduction to antitoxin. The percentage mortality for 1895 is phenomenally low—about half what it used to be—but in ten out of the sixteen years recorded the number dying per 10,000 inhabitants has been lower than in 1895. Similar results are obtained from the other tables. The conditions in the bacteriological and the pre-bacteriological periods are so different “that any comparison of the death-rate of the one period

"with the death rate of the other period will be apt to lead one to erroneous conclusions."

Arthur J. Hutchison.

Glaser (Hamburg).—*Reports on Twenty Years' Diphtheria in the Hamburger Allgemeiner Krankenhaus.* "Zeitschrift für Klin. Med.," Band 30, Heft 3, 4.

IN Hamburg from 1872 to 1891 there were 52,938 cases of diphtheria, with a mortality of 8241, or 14 per cent. In the hospital 4358 were treated, with a mortality of 1584, or 36.3 per cent. Only the most important data will be given here. Of 743 cases treated in the hospital before the fourth day of the disease, 280, or 37 per cent., died; of 325 admitted later, 163, or 50 per cent., died. The cases with high temperature gave the worst results, but the duration of the fever had less influence, whilst albuminuria increased the mortality. It is curious that the cases which only had tonsillar diphtheria give worse results than when it is spread on other parts of the mouth; and nasal diphtheria is of grave import. Of 1768 tracheotomies 343 recovered. Of 935 *post-mortem* examinations, 47 cases showed lethal complications which had no relation to the disease. The therapy consisted in ice application, spray of salt or boric solution, antiseptic irrigation of the nose, and nourishing diet. The author concludes: the mortality of Behring's cases is improved by the great number of slight cases, and the percentual mortality diminished.

Michael.

Halderman, S. S.—*Antitoxin in the Treatment of Diphtheria; with Report of a Fatal Result from a Prophylactic Injection.* "Journ. of the American Med. Assoc.," June 13, 1896.

IN an epidemic of diphtheria of great severity the writer treated with antitoxin seventy cases, all presenting the typical signs of diphtheria, and some bacteriologically proved diphtheritic, without losing a single case. He used Behring's serum as a prophylactic in twenty-seven cases, "with the desired result of preventing the development of diphtheria in all but three cases; these three cases manifesting evidence of the disease within less than seventy hours, showing that it was already in their systems and incubating."

A fatal result occurred in a child of five years old. The child had just wakened from a sound sleep, and the prophylactic dose was injected into the subcutaneous tissue below the right scapula. He made but slight outcry, lay down, and was noticed to try to scratch the spot where the injection had been made. Within four minutes the child was cyanotic, lips swollen and puffy, no radial pulse and no heart beat to be made out. Twenty-five minutes' artificial respiration, etc., was of no avail. No explanation is offered, except "idiosyncrasy."

Along with antitoxin the writer recommends Loeffler's solution locally, calomel internally pretty freely, for its cathartic effects, free administration of beef tea, sterilized milk, coffee and any carefully prepared food the patient desired. Tr. erri perchlor. in syrup and glycerine every hour (to please the nurse); if very restless, chloral and morphia; later on small doses of quinine and strychnine. He never gives potass. chlorate internally, and thinks his good results may be partly due to that fact.

Arthur J. Hutchison.

Kortright, James L.—*The Value of Antitoxin.* "American Medico-Surg. Bulletin," July 4, 1896.

A SHORT paper without figures, in which the author expresses himself in favour of antitoxin in diphtheria. He prefers Aronson's antitoxin, or that prepared by the Brooklyn Health Board, to any other preparation. The risk run is not to be ignored, but should be faced in presence of the disease, but the practice of "immunizing" should be given up.

Arthur J. Hutchison.

Mundorff, Geo. Th.—*Severe Post-Diphtheritic Paralysis in an Adult treated by Antitoxin.* "Med. Record," June 27, 1896.

THE patient, aged twenty, had diphtheria in December, 1895, was treated without serum, and recovered. A few weeks later paralysis began to appear, slight at first, but growing steadily worse, till patient came to hospital, March 2nd, 1896. He was then greatly emaciated, muscles of limbs and trunk atrophied. Two injections of antitoxin were given, and the man recovered.

It should be noted, however, that the first injection was given on March 4th—*i.e.*, two days after admission, and, therefore, before it was possible to judge whether recovery had already commenced, or whether ordinary hospital treatment alone would have been sufficient: it is, therefore, impossible to give the antitoxin any credit for the result.

Arthur J. Hutchison.

Struck, Carl.—*Once more on Antitoxin.* "The Journ. of the American Med. Assoc.," May 16, 1896.

THE first part of this paper quotes and criticises statistics from various sources, apparently in favour of the antitoxin treatment of diphtheria. It points out that percentage mortality is misleading, because in many cases where this has been reduced even as much as half (fifty per cent.), the numbers dying from diphtheria per thousand inhabitants has increased (*e.g.*, Boston); again, because the number of cases reported has simultaneously increased immensely (*e.g.*, Berlin); again, because in some places antitoxin has not been applied to very severe cases, or to cases seen after the third or fourth day of illness (*e.g.*, Chicago); again, because when antitoxin is used the drug treatment is either greatly modified or entirely given up, which alone might produce all the good results ascribed to the antitoxin; again, in one hospital the mortality in 1876 was thirty-four per cent., in 1886 only six per cent., yet no antitoxin was used (Basel Children's Hospital); again, the short experience of two years is not sufficient to determine the value of antitoxin treatment—a severe epidemic may completely change our present ideas on the subject. If no discredit is to be attached to antitoxin because it fails when used on the fourth or a later day, surely no credit should be given it when recoveries take place under similar circumstances.

If antitoxin is a specific for diphtheria, why do its advocates not use it in every case, and why does percentage mortality under its use vary from two (Stockholm) to sixty-three (Trieste)?

In the rest of the paper the ordinary treatment by drugs internally and the local application of antiseptics is briefly criticized and condemned—even the use of antitoxin is likely to be less harmful. With regard to the use of antitoxin in laryngeal diphtheria, the writer points out that it is quite illogical, because the "croup" does not become manifest till the diphtheria has already existed three or four days, *i.e.*, till it is too late to expect any good from antitoxin. Many of these are not cases of diphtheria, but simply of catarrh.

The author maintains that doctors "are enthused on" antitoxin, because diphtheria is an acute disease presenting great and sudden changes in its course and its severity, and because its natural history is not really known; on the other hand, such a fever as "enteric" will never be treated by an enteric antitoxin.

Arthur J. Hutchison.

Vissman, William. — *The Therapeutic Value of Diphtheria Antitoxin.* "American Medico-Surg. Bulletin," July 4, 1896.

THIS is a short paper, with a table (taken from C. G. Coakley's paper, *vide supra*) of the statistics of diphtheria for Boston, New York, and Brooklyn from 1880 to 1895, in which is shown—

	New York.	Brooklyn.	Boston.
Average number of deaths from 1880 to 1895 ...	1631 $\frac{1}{2}$	824 $\frac{1}{2}$	452 $\frac{1}{2}$
Deaths reported in 1895	1634	1139	588
Average number dying per 10,000 inhabitants, 1880 to 1895.....	10.84 $\frac{1}{2}$	10.24 $\frac{1}{2}$	10.90
Number dying per 10,000 inhabitants, 1895 ...	8.73	10.35	11.73

New York is thus the only city showing improvement during the antitoxin year. The percentage mortality is, on the other hand, strikingly reduced. This is due to the fact that the number of cases recorded has immensely increased. Physicians no longer diagnose diphtheria, but in any throat case take a swabbing, send it to the Health Department, and leave the responsibility of the diagnosis in their hands. Thus a child may have a white spot in its throat on which by chance one Loeffler bacillus has settled—this in the bacteriological laboratory is sufficient grounds for the diagnosis of diphtheria, which is absurd.

The danger of using antitoxin as a prophylactic is pointed out.

Arthur J. Hutchison.

MOUTH.

Beuermann, J. A.—*The Differential Diagnosis between Benign Lymphomyxoma and Malignant Lymphomyelia.* "New York Med. Journ.," Aug. 8, 1896.

THE author remarks on the extreme difficulty of diagnosis by microscopical examination between benign and malignant neoplasms of lymph tissue, especially when this is not accompanied by a knowledge of the clinical history of the case. He proceeds to describe the two forms quoted in the title, prefaced by the suggestion that "we admit the so-called protoplasm is traversed by a reticulum, the "points of intersection of which, previously termed 'granules,' may grow into "solid lumps of living matter, which in further development become vacuolated, "afterwards reticulated, and, at last, transformed into nucleated protoplasmic "bodies." Also, that we admit the existence of a delicate reticulum in connective tissue tumours, this reticulum being transformed into protoplasm. The small round-celled sarcoma of Virchow is termed lymphomyeloma. He takes a "so-called adenoid growth springing from the mucosa covering the turbinate bone" as an example of the lymphomyxoma, which is thus described: "The "main mass of the growth consists of lymph tissue, *i.e.*, a protoplasmic reticulum, "the meshes of which contain an indistinctly granulated basis substance and a "number of so-called lymph corpuscles, formations of living matter, varying in "size from a small homogeneous lump to a granular corpuscle." Stress is also laid on the fact that the reticulum is always traceable and the appearance of the masses referred to are minutely described, and are said always to exhibit "radiating spokes of living matter, which enter into and inosculate with the reticulum of the basis substance." In the lymphomyeloma, on the contrary, no reticulum is seen in the denser parts, and in others it is extremely delicate—the number of somewhat larger coarsely granulated protoplasmic bodies is far greater, and the number of still larger bodies still more marked, approaching a gliosarcoma in appearance. The more frequent these "lumps" in the reticulum the more rapid the growth and malignancy of the growth; and the fact that the fibrous capsule is unchanged is in favour of the tumour being benign. This is of especial value in tonsillar growths. Finally epithelium is attacked by malignant tumours, and not by benign.

R. Lake.

Escat.—*Phlegmonous Lingual Amygdalitis*. “Rev. de Laryng.,” Feb. 1, 1896.

THE author relates notes of a case occurring in his practice, and makes the following diagnostic points, which distinguish the condition from palatine tonsillitis, glossitis, phlegmon of the floor of the mouth, and Ludwig’s angina.

1. Evolution of a unilateral phlegmonous inflammation occurring as a complication on the decline of an acute general catarrh.

2. Very clear semiology—*e.g.*, intense dysphagia, with sensation of a foreign body in the lower pharynx; dyspnoea of pharyngeal origin; unilateral suprahyoid pain localized over the great cornu and exaggerated on pressure; swelling of lateral submaxillary glands and median suprahyoid glands especially; affection of speech; immobility of the tongue on the floor of the mouth and swelling of its base without phlegmonous infiltration of the sublingual region; existence of a unilateral, red, smooth, phlegmonous tumour on the lingual tonsil, seen by laryngeal examination.

Negative signs: integrity of pharyngeal and palatine tonsils, of the larynx, and absence of the inflammatory projection of a sublingual phlegmon.

The condition will be less rare if the laryngoscopic mirror is more frequently used and localization of these purulent foci is more carefully made.

R. Norris Wolfenden.

Grumach (Reisenberg).—*A Hairy Pharyngeal Polypus*. Inaugural Address, Königsberg, 1895.

THE author removed a soft, round tumour, which was attached to the left side of the arcus palatinus. It was removed with the galvano-cautery snare. It consisted of a layer of epidermis, with rete malpigi, epidermal glands, hairs and erectorcs pilorum, containing as *substantia propria* fat and muscle.

Michael.

Piergilli, Dr. B.—*A Case of Alarming Hæmorrhage after Tonsillotomy*. “Arch. Ital. di Otol., Rinol., Laring.,” July 3, 1896.

A CASE of alarming hæmorrhage, which necessitated ligature of the right common carotid (by Prof. Durante), is reported by Piergilli. The tonsillotomy was performed by another surgeon and hæmorrhage appeared, recurring four or five times with intervals of five days, and so abundantly that, other remedies having failed, it was decided to tie the carotid. Soon after the patient became aphasic and had convulsions, but both these symptoms disappeared, and after two months recovery was complete.

Massci.

LARYNX.

Ebstein (Vienna).—*Leucæmic Infiltration causing Laryngeal Stenosis*. “Wien. Med. Woch.,” 1896, No. 22.

THE patient was affected with an abscess of the neck three years ago, and since then had suffered from hoarseness. He proved to be leucæmic; his arytenoids and ventricular bands were infiltrated. Three months later the swelling had increased, and the supra-glottic region was also invaded and covered with a yellowish secretion. Stenosis became so severe that tracheotomy was necessary. He succumbed five days later, after a temporary improvement. *Post mortem*: The whole larynx was infiltrated, the vocal bands appearing as cylindrical masses. Microscopical examination showed sub-epithelial infiltration by leucocytes.

Michael.

Habermann, J. (Graz).—Contributions to our Knowledge of Chronic Laryngitis with Pachydermia. Separat-Abdruck aus der "Zeitschrift für Heilkunde," Band XVI., 1895.

IN a short introductory account the author traces the development of our knowledge of this subject, passing in review the various advances that have been made from the publication of Virchow's article in 1860 to the most recent utterances of Chiari.

The greater part of this paper is occupied by very detailed reports of the microscopic examinations of fifteen larynges affected with pachydermia. This collection of material included larynges in which there were only traces of the cup-like formation, and in which the initiatory stages of the process were studied; and others which presented appearances in the anterior parts of the vocal cords similar to the cup formations, and which various writers, notably Krieg, have termed pachydermia. Cases of tuberculosis and syphilis in which pachydermia occurred secondarily, and Virchow's circumscribed variety, which laryngologists are agreed is best classed with the papillomata, were excluded from the investigation.

The following is a brief summary of the conclusions arrived at by the author. In every case there were changes in the connective tissue of the mucosa and sub-mucosa of the true and false cords which appeared as a hypertrophy, and which varied greatly in degree and form in each instance. As a rule, this was confined to the superficial layers, and only occasionally were the strands of connective tissue between the upper layers of the internal thyro-arytenoid muscle involved. In the former case the elevations assumed the shape of elongated swellings, or polypoid or papillary excrescences at different parts of the true and false cords. On the true cords, the elevations usually ran from before backwards on the upper surface, and rarely appeared on the edge or lower side. Similar prominences, but often of a more papillary nature, were frequently found on the lower part of the outer wall of the ventricle. Polypoid outgrowths, or such as might even be designated polypi, were very often seen in the appendix. These occasionally descended almost to the surface of the vocal cord. Had they been larger they might have projected from the opening of the ventricle over the cord into the lumen of the larynx, and thus given rise to appearances which were formerly termed "prolapse of the ventricle."

Increased development of the papillary body of the vocal cords was always associated with the thickening of the connective tissue. At some places, especially the vocal process, also the posterior wall, and more rarely the pars libera, individual papillae developed into papilloma-like growths.

In the majority of the cases examined the cup-like prominences on the vocal processes were present. In the more marked of these the connective tissue presented a typical arrangement. The depression in the middle corresponded exactly to the point of the hyaline process. Its inner side was covered by more or less thickened connective tissue, from which strands radiated upwards and downwards, terminating at the surface in papillae, and covered by thick layers of pavement epithelium. In this way papillary excrescences originated above and below the point of the hyaline process, which at the same time formed the boundary of the cup-shaped prominence. The author favours B. Fränkel's view as to the development of the cup-shaped structure—viz., that it results from the pressure exercised by the vocal processes upon one another during phonation.

On the posterior wall of the larynx the changes in the connective tissue corresponded on the whole to those in the vocal cords. Besides a general hyperplasia of the connective tissue, in some cases papillary and small polypoid excrescences were found.

Changes in the Epithelium.—The author's investigations did not reveal any striking abnormalities in the distribution of the two varieties of epithelium in the larynx.

The cylinder-celled epithelium had proliferated only in a few instances, while the flat-celled showed a thickening in all cases. This was proportionate to the other pathological changes, and, as a rule, the flat-celled epithelium was thicker where the underlying connective tissue had proliferated. The flat-celled epithelium attained its greatest development on the vocal processes and posterior wall.

A true horny layer was generally found over a considerable area, and as a rule specially thick, on the vocal processes particularly, on the free edges of the vocal cords, and at some parts of the posterior wall. This layer was developed especially in those places that had been exposed to pressure during life, and this explained the great thickness of the layer in the middle of the cup-like formation.

Ulcers.—In the fifteen larynges examined, twenty-one erosions and ulcers were found. These occurred most frequently on the vocal processes (eight times on the right, seven left, five both); less often on the pars libera of the vocal cords (four right, two left, two both). When examined more closely, it must be confessed that, from the pathological changes in the ulcers themselves and in their vicinity, it was evident that the majority may have originated comparatively shortly before death. In a number of cases, however, it can be positively stated that the ulcers were of longer duration. In all the ulcers examined it could be proved that they had developed from the surface. Nothing in the pathological changes in the larynx or in the *post-mortem* examination of the rest of the body indicated that the ulcers were of a tubercular or syphilitic nature.

Cedema.—The author's observations confirmed the association, already pointed out by other writers, of pachydermia and ulceration with diseases which cause general congestion—*e.g.*, pulmonary emphysema, cirrhosis of the liver.

Leaving out of account the epiglottis and ary-epiglottic folds, which were not examined histologically, the cedema extended over the ventricular bands, in which it was comparatively slight, and attained its greatest development usually on the upper surface of the vocal cords, extending to their inner margins. The true cords were thus transformed into thick cedematous swellings, in which the connective tissue fibres were forced far apart, leading to the formation of fairly large spaces filled with fluid. Cedema was found only once in the connective tissue to the inner side of the vocal process.

A. B. Kelly.

Heryng, Theodor.—*On Sulpho-ricinate of Phenol, and its Use in Tubercular and Chronic Diseases of the Pharynx, Larynx, and Nose.* "Therap. Monats.," July, 1896.

In this, the third, paper on the above subject, Heryng describes shortly seven cases of tubercular disease of the larynx, and the results obtained in them with phenol. He has to record "improvement" much more often than "cure," but for this he blames chiefly the smallness and overcrowded state of his ward, and the absolutely hopeless class of case that constitutes his hospital material. Four of the seven cases were healed in his ward. In Cases II. and III., diseases of the vocal cords, brilliant results were obtained. In Case II. the tubercular growths on the vocal cords disappeared in two weeks, and in four weeks all the pathological changes had disappeared and the voice was clear and loud. Case III., a tubercular affection of both vocal cords, improved in a very short time; the voice became clearer and the cough ceased. In Case I., an infiltration of the pars arytenoidea as large as a hazel-nut was reduced to one-third its volume in eighteen days. The remainder was removed, at the patient's urgent request, by surgical methods. In Cases IV., V., VI., VII., in which all parts of the larynx, except

the epiglottis, were involved, the chief complaint was of dysphagia and dysphonia. Both symptoms improved in a relatively short time and the infiltrations shrank to "a minimum."

In a large number of hospital patients with advanced laryngeal phthisis and serious affections of the lungs (even hectic cases), quite unexpectedly good results were obtained with phenol as regards both ulcers and infiltrations.

The effect on tuberculosis of the epiglottis varied much, according to the nature and stage of the disease. One-sided infiltrations, not tending to break down, gave the best results. The less marked the inflammatory symptoms (redness and cedematous swelling) the quicker could the process be stopped. The epiglottis and the false cords were the worst parts to treat; improvement was obtained, but no cure, without first having resort to surgical procedures. After operating, a two per cent. pyoktannin solution should be applied to the raw surface, and no phenol used till eight or ten days later. During that time Heryng recommends the use of inhalations of menthol with tinct. opii and sodii brom., and a five to ten per cent. spray of cocaine before eating.

"Phenol sulpho-ricinate is no specific for laryngeal phthisis; but by removal of the inflammatory symptoms, by stimulating the absorption or elimination of the tubercular infiltrations and their products, by rapidly diminishing the dysphagia, it gives the larynx, in certain cases, its best chance of restoration of function. Combined with surgical (if necessary), hygienic, dietetic, and climatic treatment, it forms a notable addition to our means of combatting tuberculosis of the larynx, and also tubercular ulcers of the nose and pharynx."

Turning next to the treatment of various chronic conditions, Heryng reports satisfactory results in four cases of chronic hypertrophic rhinitis, where the swelling was not reduced by cocaine. Twenty to thirty per cent. phenol was rubbed gently on to the hypertrophied parts. The hypertrophy disappeared in two to three weeks, and free nasal respiration was restored. The accompanying retro-nasal catarrh and pharyngitis sicca improved at the same time.

Phenol was used in three cases of rhino-pharyngo- and laryngo-scleroma, producing considerable improvement, viz., a diminution in size of the infiltrations, and consequently decrease in the stenosis of the nose and larynx. Very good results were also obtained in cases of pharyngitis lateralis hypertrophica, both simple and syphilitic, and again in chronic, atrophic, or subacute pharyngitis with swelling and redness of the mucosa.

In the larynx it was found to be a very effective preventive of the recurrence of papillomata after operation; further, in some cases a few applications of the phenol were found sufficient to cause the papillomata to disappear completely without any surgical interference.

Arthur J. Hutchison.

Koschier (Wien).—*On Tracheal Tumours.* "Wiener Klin. Woch.," 1896, No. 24.

A FORTY-SIX years old patient, who had suffered for two years with dyspnoea, constantly increasing, came complaining of severe attacks of suffocation. Laryngoscopic examination showed diminished mobility of the left vocal cord, and in the trachea two red exoriated tumours were seen, which nearly occupied the whole lumen of the trachea. After a preliminary tracheotomy the trachea was split longitudinally and the growths removed, their bases being cauterized. The microscopic examination showed that they were cylindromata.

Michael.

Krebs, G.—*The Treatment of Chronic Catarrh of the Pharynx and Larynx.*

"Therap. Monats.," July, 1896.

(Continued from p. 172.)

THIS paper takes up the local treatment of chronic pharyngeal catarrh. Counter-irritants applied to the skin of the throat and cold water fomentations are antiquated

and of but little value. Of gargling the same may be said, whatever method is used. Opinions differ as to inhalations; some consider them useful, while others think they render the throat more delicate and liable to take fresh colds. Alkalis, astringents, narcotics, and various pine oils are useful in different cases.

More trust is placed in insufflations, sprays, and pigments. Only mild, non-caustic substances may be used as powders. A caustic powder is not rendered less caustic by being mixed with some bland powder, such as starch, etc.: it is spread over a larger surface, but each grain of the active powder still retains its original caustic power: consequently, while some parts of the mucous membrane receive no treatment at all, other parts are strongly cauterized. Thus the only powders suitable for insufflation are such as boracic acid, tannin, calomel, or zinc sozoiodol (Schmidt).

For painting the throat, the best drug is a solution of silver nitrate, commencing with daily applications of a two per cent. solution, gradually increasing the strength to ten per cent., and at the same time diminishing the frequency of the painting. Bresgen and others have given up the use of this drug. Zinc chloride, one to two per cent. in water, or two to ten per cent. in glycerine, is highly spoken of (Mackenzie, Jurasz). Others prefer tannin in glycerine. There is also great difference of opinion with regard to the value of iodine solutions, Schech, Jurasz, and others recommending them in marked swelling of the mucosa; B. Fränkel and others in the atrophic form; while Gottstein, Stoerk, and others get no result from them in either case. Massage of the mucous membrane is another doubtful procedure.

Granulations on the posterior pharyngeal wall exist both with and without chronic catarrh. There is no means of deciding in a given case whether the granulations are to be considered normal or pathological, therefore to remove them may or may not do good; to replace them by cicatrices must do harm. On the other hand, the hypertrophic lateral bands require energetic, but not too extensive, treatment.

Tonsils that remain hypertrophic after puberty generally call for tonsillotomy. Uvulotomy is only required when the uvula reaches the epiglottis, and so causes constant irritation.

Pachydermia diffusa laryngis is then dealt with, but the author gives no opinion of his own on the subject, quoting instead the summary of O. Chiari's paper read at the Tenth International Congress at Rome.

Arthur J. Hutchison.

Mager (Wien).—*Case of Leucæmic Infiltration of the Larynx*. "Wiener Klin. Woch.," 1896, No. 26.

A FIFTY-EIGHT years old patient affected for one year by leucæmia became dyspnoic. The laryngoscope showed immobility of the right half of the larynx; the whole mucous membrane red and swollen; the swelling seemed to be a hard infiltration; the vocal bands were swollen. Death followed tracheotomy in a few days. The *post-mortem* examination showed perichondritis and necrosis of the right arytenoid cartilage. The histologic examination of the mucous membrane showed leucæmic degeneration of the tissues.

Michael.

Massei.—*Recurring Laryngeal Papillomata*. "Arch. Ital. di Laring.," April, 1896.

THE author presented to the Naples Academy of Medicine a girl who, notwithstanding a thyrotomy performed for diffuse papillomata of the larynx, had lost her voice. Recurrence had taken place on the inferior surface of the left vocal cord. He emphasizes his opinion already expressed that when it is not possible to

operate by endo-laryngeal methods for laryngeal papillomata, on account of dyspnoea, simple tracheotomy may be sufficient; not only because there are well authenticated cases of spontaneous disappearance of the growth, but also because thyrotomy (as in the case presented) may not prove sufficient for a complete cure.

Massei.

Moure.—*Nodular Laryngitis of Children.* "Rev. de Laryng.," Feb. 8, 1896.

THIS condition is well known in adults, but for some years Moure has observed that these lesions were more frequent in small than large larynxes—*e.g.*, in tenors and females. Nodules are rare in baritones and exceptional in basses. They are more common in persons speaking or singing in a deep register. Analogous affections are frequently met with in children of seven to ten years of age. Children are often brought to the physician hoarse, or speaking in a deep voice, or aphonic. The voice is uncertain, raucous, bitonal, or aphonic, as in acute catarrh, but the condition persists for weeks or months. The redness and roughness of the cords is attributed to the onset of change of voice, but careful examination reveals the fact that emission of head or falsetto register, so easy to the child, has become impossible; the voice is diphthonic, and under the mirror the cords are seen to touch only at a point in their anterior third at a sort of rounded swelling, which leaves a small elliptical orifice in front and a larger one behind, and this explains the hoarseness and double sound on emission of the vowel *E*.

Inquiry elicits the fact that the child is made to sing at school in chorus. A certain number of children are made to sing the lower parts; the pieces are not chosen intelligently, and a child sings energetically. He soon becomes hoarse—at first temporarily, then permanently. Moure has often observed this sequence of events in school children. Chorus singing should be forbidden to every child who is hoarse, and the voices should be classed with more care. Rest and chloride of zinc applications and electrization do some good, but a certain amount of hoarseness persists, often only to disappear at the breaking of the voice towards twelve or thirteen years of age.

R. Norris Wolfenden.

Whistler, W. McNeill.—*Syphilis as it Affects the Larynx.* "The Clinical Journ.," July 15, 1896.

THE usual division of syphilis of the larynx into secondary and tertiary is unsatisfactory. It is better to divide into three stages: (*a*) earliest manifestations, *viz.*, catarrhal congestions and mucous patches; (*b*) an intermediate period, the signs of which are diffuse redness, thickening, and ragged ulceration, especially of the vocal cords—"relapsing ulcerative laryngitis"; (*c*) later manifestations—(1) acute gummatous inflammation, (2) relapsing laryngitis of the tertiary period, (3) chronic fibroid.

The congestion of early laryngeal syphilis may be diffuse or distinctly patchy. The latter, though very suspicious, is not absolutely characteristic. Mucous patches are not so rare in the larynx as some observers have thought. They vary in appearance according to their situation, but in their primary state they are all more or less papular. This serves to distinguish them from the erosions of ordinary catarrh. The intermediate stage may be the immediate outcome of the catarrhs and mucous patches of the early period, or it may show itself three or four years after the primary sore, or even later. The ulcers of this period are small and irregular in outline, with ragged thickened edges, often multiple, and the cords on which they are situated look as if pieces had been torn out. The ulcers are, however, comparatively superficial, and not usually accompanied by the perichondritis and necrosis of cartilage of the tertiary period.

Middlemass Hunt.

Winkler (Bremen).—*Contribution to Pathology of Stuttering founded on Examination of Stuttering School-children.* "Wiener Med. Woch.," 1896, Nos. 17, 18, 19.

IN the majority heredity could not be proved, and spontaneous cure is rarely observed. Physical shock caused stuttering in two cases. In sixteen per cent. the habit is acquired at school, and it is supposed that imitation is the cause, especially if there is physical depression. Seventy stuttering children had between them one hundred and thirty-six younger brothers and sisters with normal phonation. In some of the patients the disease appeared with development of speech, in others it followed acute disease, as scarlet fever or measles. In most of these cases hypertrophy of the tonsils or adenoid vegetations existed. In some cases the patients believed that the stuttering had a traumatic origin. Scrofula was found in several cases; in others various neuroses; and in some phimosi and balanitis was present. The formation of the skull, sometimes believed a cause of stuttering by some, was not borne out by these observations. In a few cases only was the intelligence diminished, or the expansive power of the thorax diminished. In fifteen cases the stuttering was complicated by other defects of speech. Stuttering of vowels was only observed in six cases, and the consonants were stuttered in the remainder.

Michael.

Massei.—*A Foreign Body in the Windpipe and another in the Gullet.* "Arch. Ital. di Laring.," July, 1896.

A CHILD, nine years old, who was keeping a gourd seed in the mouth, inspired it, and was suddenly seized with symptoms of suffocation, which subsided entirely in a few days. After several alterations in breathing the patient applied to the author, who discovered the grain at about the third or fourth tracheal ring. Tracheotomy was proposed but not accepted, and the child became worse for some days, when he suddenly improved. The foreign body was not seen, and supposed to have been coughed up. Five days later a fresh attack of dyspnoea, the patient's life in danger; and when the author saw the child he feared he would die in his consulting-room. The grain was lower down in another position: at the third attempt at extraction with laryngeal forceps, although displaced to the seventh tracheal ring, it was successfully removed, and breathing instantly became normal. The reporter, emphasizing the great advantages of operation *per vias naturales*, does not advise it always, as tracheotomy, in many instances, is not only necessary, but urgently demanded.

The foreign body impacted in the gullet was a piece with two artificial teeth which a gentleman had swallowed while sleeping. A surgeon, who was soon consulted, pushed it into the stomach, and on the following day the patient (a man about fifty) applied to Massei, who, after being assured that really the foreign body was not in the gullet, advised a diet consisting almost absolutely of potatoes. At the twentieth day the patient expelled the teeth without any trouble. Massei.

Massei.—*Diagnosis and Treatment of Laryngeal Tuberculosis.* Paper read at the second Congress of the Italian Laryngological Association in Florence in September, 1895.

IN regard to the diagnosis, the author points to the difficulty of a positive bacteriological answer, and relates cases in which the microscopical examination demonstrated the true nature of the disease, from which he concludes a great want of recognition, as there are cases which clinically resemble chondritis, and are of primary tuberculosis of the larynx. It is, then, highly probable that primary laryngeal tuberculosis is more frequent than generally believed.

From the other side he relates cases in which few tubercular bacilli were found, and the course, the issue, and the symptoms were such as to exclude the tubercular nature of the disease. He recollects Knight's and Sharp's opinions on the subject, and mentions some studies he began since 1892 on the argument of the presence of tubercular bacilli in healthy subjects, and which remained sterile. He then insists upon the necessity of an accord among the bacteriological researches, the organic impairment, and the clinical form for a right diagnosis.

Treatment.—Cases of complete recovery are reported with simple tracheotomy, curettement, or simple application of the phenol sulpho-ricinate proposed by Ruault, of Paris. Causes have modified the first opinion of the author in regard to laryngeal phthisis. He relates the late opinion of Heryng, reported in this journal; but as regards promises and indications, the author is of opinion that we do not know the circumstances which allow us to assist to a cure. He does not deny the possibility of a complete recovery; he cannot give exact indications for foreseeing the issue of this terrible disease.

But in general a narrowing of the larynx without serious lung impairment and general good health, let us hope much in tracheotomy, as the polypoid form and the chondritis seem to be the most accessible to a local treatment.

An early interference, besides, also assists in a probable success; hence the necessity of an early diagnosis and the interest of the few remarks above made, and the necessity of help to the diagnosis, not only with bacteriological researches, but even with microscopic examination of small pieces removed, and inoculation in animals, if necessary.

Massel.

THYROID, &c.

Finlayson.—*A Cretin under Thyroid Treatment.* "Glasgow Med. Journ.," May, 1896.

THIS is the further history of a child already described by Finlayson and referred to in the JOURNAL OF LARYNGOLOGY, May, 1896. Since October, 1893, the child had received thyroid treatment in hospital during four periods, amounting in all to nine months; the other seventeen or eighteen months the child had been at home and receiving no treatment. The total result was great improvement as regards growth, power of walking and of speech, appearance, condition of hair, mental condition, etc., etc. But it was noted that during residence in hospital improvement was marked and rapid, while during the intervals there was a certain amount of retrogression.

Arthur J. Hutchison.

Hodge, G.—*Myxœdema.* "American Medico-Surg. Bulletin," May 30, 1896.

A SHORT report of three cases. The first, occurring before 1885, was unrecognized during life. The second, the mother of two children, had always been healthy till onset of myxœdema; was treated without thyroid, and did not improve. The third, a girl of twenty-eight, had gradually grown ill during seven years, but myxœdema was not diagnosed till June, 1895 (prior to this the doctor had not seen her for eighteen months). She was then stout in limbs, body, and face, was irritable, dull, and took no interest in her work; complained of drowsiness and loss of memory; speech slow and hesitating, skin dry and hair falling out, and menstruation stopped. Under thyroid treatment (one grain of Armour's dried thyroid three times a day) and Blaud's pill with arsenic, she rapidly improved. By Christmas she was practically well. She then stopped taking thyroid, and the symptoms began to return.

Arthur J. Hutchison.

Heddaeus (Heidelberg).—*Acute Strumitis, caused by the Diplococcus Fränkel-Weichselbaum, with Secondary Pneumonia.* "Münchener Med. Woch.," 1896, No. 27.

THE patient, a goitrous subject, had noticed rapid increase of the thyroid during the three months previous to his being seen. He also suffered from attacks of dyspnoea. A fluctuating tumour the size of the fist was found attached to the right side of the thyroid gland. This tumour was removed. A few days afterwards right pneumonia set in, the patient recovering, but the hoarseness persisting, which was due to right recurrent paralysis. The tumour was a cystic adenoma, and bacteriological examination proved the presence of the diplococcus Weichselbaumii in its contents and in the pneumonic sputum.

Michael.

Langfeldt (Ingelfingen).—*On the Thyroid Gland.* "Raus's Medicinalanzeiger," 1896, No. 13.

A BUTCHER, aged thirty, had suffered for years with increasing weakness and loss of weight. No organic disease or cause could be found. The case, however, became clear on the patient saying he eat every day for luncheon roasted pig's thyroid. The author prohibited the thyroid gland, and in a short time the weakness disappeared, the weight increased, and the patient was cured. This shows that roasting does not destroy the activity of the gland; that it has no influence on the stomach; that it destroys the normal fat; and that the effect ceases with the use of the gland.

Michael.

Winter, Henry Lyle.—*The Effects of Thyroid Extract in the Treatment of Graves' Disease.* "The American Medico-Surgical Bulletin," July 11, 1896.

A REPORT of four cases. Cases I. and II. were sisters; mother and grandmother were Swiss, and suffered from goitre, with (judging from report) the same symptoms as were present in the cases observed. The chief symptoms complained of were a feeling of nervousness, flushings, "startings" at slight noises, accompanied by violent palpitations and profuse general sweating; at other times heart not very rapid; goitre small; exophthalmos slight. In Case I., morning diarrhoea and anæmia; in Case II., no marked anæmia. Both did well on thyroid extract, in doses of $2\frac{1}{2}$ grains to 5 grains; in both it was able to be discontinued, and the patients reported themselves "entirely well." Cases III. and IV. were more typical cases of Graves' disease. In Case III. the condition had started after recovery from ovariectomy (the left ovary had been removed). Case IV. had been a prostitute. Thyroid treatment exaggerated the symptoms in both, and had to be given up. The history of Case IV. is interesting, but unfortunately not complete, as the patient was lost sight of. Whilst she remained under observation, receiving "mixed treatment," the symptoms of Graves' disease gradually and completely disappeared, but diminished reflexes, double vision, shooting pains, etc., pointed to the development of tabes. The author does not suggest that the two diseases were in any way related to each other, but merely states the facts as they occurred.

In conclusion, the author gives his reasons for considering Cases I. and II. to be cases of true exophthalmic goitre, and points out that while thyroid treatment may sometimes be beneficial, it must not be used indiscriminately.

Arthur J. Hutchison.

Obituary.

Dr. SAMUEL SEXTON.

OTOLOGISTS have lost another well-known colleague in Dr. Sexton, who died at the age of sixty-one on the 11th of July last. He was born in Ohio, and in 1856 took his degree at Louisville. His numerous writings have obtained for him a world-wide fame, amongst the more important of his communications being, "Rare Forms of Ear Disease," "Deafness and Discharge from the Ear" (written with C. A. Duane as co-editor), "The Effect on the Ear of High Atmospheric Pressure in Tunnel Construction," "Anomalies of the Membrana Tympani from Interruption of Intra-Tympanic Air Supply," "Excision of the Ossicles of the Drum of the Ear for Chronic Purulent Inflammation of the Middle Ear Tract," "Operation for Deafness and Tinnitus due to Immobilization of the Ossicles, and for Otorrhœa," etc., etc. His name is most intimately associated in our minds with the operation of extraction of the ossicles, and his instruments for these operations are in general use.

REVIEWS.

Clarkson, A.—*A Text-Book of Histology, Descriptive and Practical, for the Use of Students.* With 174 coloured original illustrations. Bristol: John Wright & Co. London: Simkin, Marshall, Hamilton, Kent, & Co., Ltd. Price, 21s. net.

THE first two chapters of this book are devoted to the general methods of histology, the subsequent chapters deal severally with the structure of the tissue or organ under consideration. References have been entirely omitted, and also, in the practical portions of the work, only the well-known and tried methods are given. In the chapters dealing with general methods, the preparations and uses of the various stains are given in most practical and clear language. As an example of this we would refer to (page 41) Weigert's method of staining medullated nerve fibres. For the rest the author carries out his task well, illustrating the tissues, as they are described, by a series of beautifully drawn and coloured plates, one hundred and seventy-four in number, which of their kind stand in the foremost rank; those of the special organs and of the cerebro-spinal system being of exceptional value. It is altogether a very valuable addition to the text-books of our profession, and one which we can recommend most cordially to both teachers and students as being of great intrinsic value.

Paget, S.—*The Surgery of the Chest.* Illustrated. Bristol: John Wright & Co. London: Simpkin, Marshall, Hamilton, Kent, & Co., Ltd. 10s. 6d. net.

THE author has been led by his studies and cases, several of which he has published, to write this book; he has gathered together into a handy

volume the cream of the accumulated records of the surgery of the chest. Mr. Paget gives less of his own views and opinions than he does of those of others. This is, however, not so great a matter as it would seem at first sight, for there is not a great divergence of opinion as to treatment, nor is there much in the questions of diagnosis and treatment. From amongst the most useful portions of the book may be mentioned (page 4) the description in congenital malformations of cervical ribs (page 8 *et seq.*), concussion and contusion of the chest, and the chapters on emphysema. Under intra-thoracic new growths we also have much which is extremely interesting and instructive, and the advantage of a considerable amount of original matter. The illustrations, which are very good, were executed by Mrs. Paget.

In chapter v., on emphysema, Mr. Paget has omitted to allude to the altered conditions which will now be evident in wounds of the chest caused by small-bore bullets and high velocity. We doubt the occurrence of emphysema, and perhaps hæmatothorax, except as a result of other forms of injury—as, for example, shell wounds; nor should the mortality of penetrating wounds be as high as quoted, viz., sixty per cent., and “much higher for actual gunshot wounds of the lung”—that is to say, where the above conditions apply, and where first field dressings are in use. We would draw attention to the pertinent remarks bearing on the medico-legal aspect of wounds of the heart in chapter x. An important point is raised (page 131) in the reduction of diaphragmatic hernia, the surgeon being advised to operate through the pleural and not peritoneal cavity. Certainly Mr. Paget adduces very weighty reasons for this course, and the cases quoted also bear out this view, though the author does not go as far as Rydygier and advocate opening the pleura, when the abdomen has already been opened.

In conclusion, we have perused this work with pleasure and profit, and feel sure that it will occupy a place in every library of reference and prove of great value to the surgeon and practitioner; and stand as a proof of the greatest care and perseverance on the part of its author.

NEW PREPARATIONS, ETC.

IMPROVED GREGORY POWDER. (J. L. Bullock & Co., 3, Hanover Street, Hanover Square, London, W.)

This powder, whilst maintaining the full properties of the original compound, has been most materially reduced in bulk, by condensing it and removing all inert matter. We have thus a powder which but little resembles that nauseous compound which was one of the small terrors of childhood, and which, if given in solution, is almost pleasant. It can be obtained and administered in the form of cachets when the patient is old enough to swallow one.

SOLOIDS—(1) Zinc Chloride gr. i.; (2) Corrosive Sublimate gr. 1.75; (3) Silver Nitrate gr. i.; (4) Potassium Permanganate gr. 5. (Burroughs, Wellcome, & Co., Snow Hill Buildings, London, W.C.)

There is a structural difference between a “soloid” and a “tabloid,”—“soloid” being the name given to compressed drugs used for external application, as the

above. Each has a distinct colour added to it, if it has not already one of its own: corrosive sublimate, purple; zinc chloride, yellow; silver nitrate, blue; and so on. This has the effect of making the solutions as distinctive of external applications as the solid form shows they are not to be taken internally. In dissolving them it is easy to estimate the strength of the solution: thus, the corrosive sublimate gives with four ounces of water a strength of one in one thousand. These preparations are of obvious value when travelling, or where there is no chemist within reach, or in an emergency at any time. They are also a great convenience when operating in the country, their small compass comparing most favourably with the more bulky solutions.

ETHYL CHLORIDE (BENGUÉ). (B. Kühn, 36, St. Mary-at-Hill, London.)

The properties of this preparation are already sufficiently well known. It is the present model of tube to which we wish to draw attention. At one end is the usual pin-hole jet—at the other a glass rod, with a minute hole up it for a short distance. This is scratched with a file and broken off, if the original orifice plugs. There is also a spare cap for use in event of the second end being turned into a spray.

COLCHICINE SALICYLATE CAPSULES. (G. Trochet, Paris. Agent: B. Kühn, 36, St. Mary-at-Hill, London.)

This preparation of colchicum appears to be very reliable and to be much less depressing than the older forms of the drug. The mode of administering it also is one to be recommended, the form and size of the capsule being very elegant; also the salicine used is the natural methyl salicylate, and is combined with colchicum in the form of colchicine, thus giving in each capsule a dose, one-260th grain of the latter, and five grains of the former. Lastly, they will be found reliable in quality and strength.

THE JOURNAL OF LARYNGOLOGY, RHINOLOGY, AND OTOTOLOGY.

Original Articles are accepted by the Editors of this Journal on the condition that they have not previously been published elsewhere.

Twenty-five reprints are allowed each author. If more are required it is requested that this be stated when the article is first forwarded to this Journal. Such extra reprints will be charged to the author.

The Editors are not responsible for opinions expressed in original Articles or Abstracts in this Journal.

Editorial Communications are to be addressed to "Editors of JOURNAL OF LARYNGOLOGY, care of Rebman Publishing Company, Limited, 11, Adam Street, Strand, London, W.C."

A METHOD OF MAKING ANATOMICAL SECTIONS OF THE TEMPORAL BONE.¹

By Dr. CHIUCINI (Rome).

I AM convinced of two things: (a) that although much has been studied with regard to the temporal bone, it would be absurd to say that the subject has been exhausted, and that there is nothing left to do; (b) collections of temporal bones are of immense value to the scientific aurist, because in their study is to be sought the solution of many important questions. I hold that it is most useful (1) to form collections of temporal bones; (2) that in making sections of them the bone should suffer as little damage as possible, both in the various points of its anatomy and in their relation to one another. Hence it is important to preserve all the parts of the bone, for in making some comparative studies one point of the bone may become of great interest, which appeared of little or no importance at the period of making the section. For this reason the use of the gouge and hammer should as a rule be abandoned, as it leads to the loss or destruction of more or less important parts. Of course this is not always possible; still it does not militate against my principle, that in order to obtain the greatest profit from the study of sections of temporal bones we should make the preparations with as little damage as may be. A section should therefore comply with the following rules:— (1) Respect the integrity of the entire bone as much as possible. (2) Make methodical sections so as to show the greatest possible number of interesting anatomical particularities, and passing so near other points that they can easily be demonstrated by secondary sections. (3) See, in conclusion, that the several fragments can be easily put together so as to be able to study and preserve the temporal bone in its entirety. Neglect of these regulations is apt to leave us with a collection of frag-

¹ Paper read at the Fifth International Congress of Otolaryngology: Florence, September, 1895.

ments, requiring all our patience in order to place them in relation again.

The sections of the temporal bone can be readily made with the lower numbers of the saws used by watchmakers; they leave quite a narrow furrow. With dried bones the sawing is facilitated by doing it under a small drip of water; with fresh bones the dura-mater and periosteum should first be removed with great care.

FIRST SECTION OF THE TEMPORAL BONE is effected in two cuts:—

First cut. (Fig. 1.)—Passes along a line which, perpendicular to the

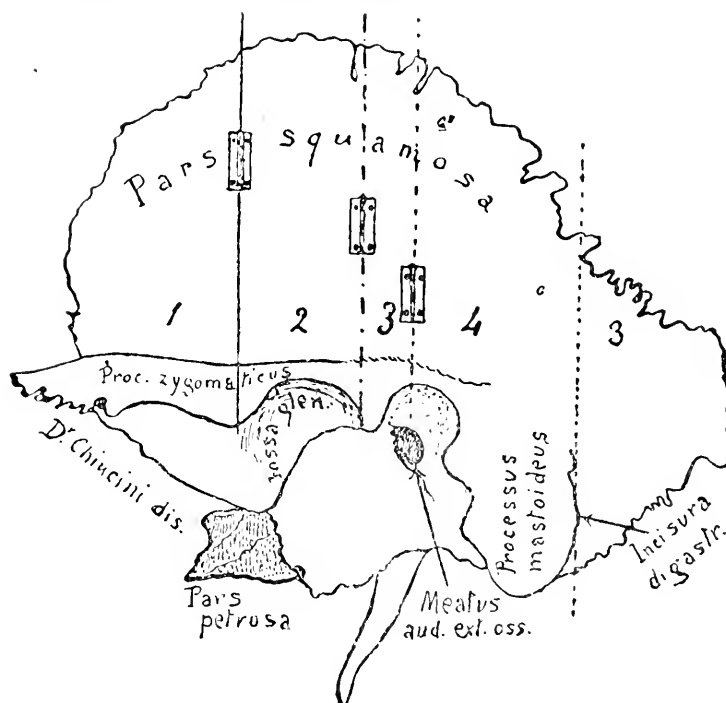


Fig. 1.

direction of the zygomatic process, goes through the external superficies of the squamous portion at the level of the articular tubercle. In a perpendicular direction¹ to the external surface of the squamous portion it passes from the exterior to the interior, so as to traverse all the articular tubercle.

Second cut. (Fig. 2, a'.)—Starts from the superior margin of the petrous bone, from a point corresponding to the bottom of the internal auditory canal, and comes forward to unite with the extremity of the preceding section.

¹ Here and elsewhere through the paper it is understood that the rules given cannot always be applied in an altogether restricted and absolute sense.

By these two cuts the temporal bone is divided into two pieces: an anterior portion (which we will refer to as No. 1, in order to explain what follows) containing the anterior part of the squamous portion and the apex of the petrous bone, with part of the cochlea; and a posterior part, No. 2, containing all the rest of the temporal bone.

SECOND SECTION OF THE TEMPORAL BONE.—It is also effected by two saw cuts, both of which are carried out on piece No. 2.

First cut. (Fig. 1.)—Is parallel to the first division in the preceding section, but more posterior, so as to traverse the superior root of the

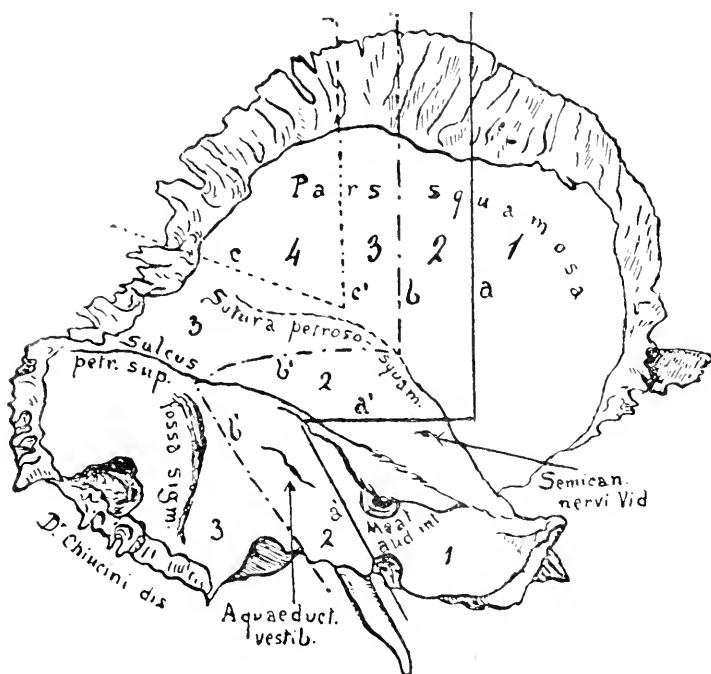


Fig. 2.

zygomatic process, passing a few millimètres in front of the Glasserian fissure. It stops on encountering the squamo-petrous suture (in children), or its remains (in adults), or the line corresponding to this suture.

Second cut. (Fig. 2, b'.)—This also starts from the superior margin of the petrous bone, at about one centimètre from its point of union with the squamous portion; it comes forward describing a small internal concavity, so that at the inferior surface of the petrous portion it grazes the internal margin of the styloid process; it finishes by meeting the extremity of the preceding cut.

With these two saw cuts piece No. 2 in its turn has been divided into two parts: an anterior part, containing the tympanic cavity, and a posterior part, No. 3, in which are the meatus auditorius externus and the mastoid process.

THIRD SECTION OF THE TEMPORAL BONE.—This likewise is effected by means of two cuts through piece No. 3, just described.

First cut. (Fig. 1, c.)—Passes forward from the external border of the digastric fissure, traversing the mastoid process, and going close to the point of union of the base of the petrous bone with the squamous portion; it stops after having traversed the posterior half of the external auditory meatus.

Second cut. (Fig. 1, c'.)—Is parallel to the first cut in the second section, but more posterior, so that it passes through the middle of the external auditory meatus so as to meet the last cut.

This third division of the temporal bone divides piece No. 3 into two

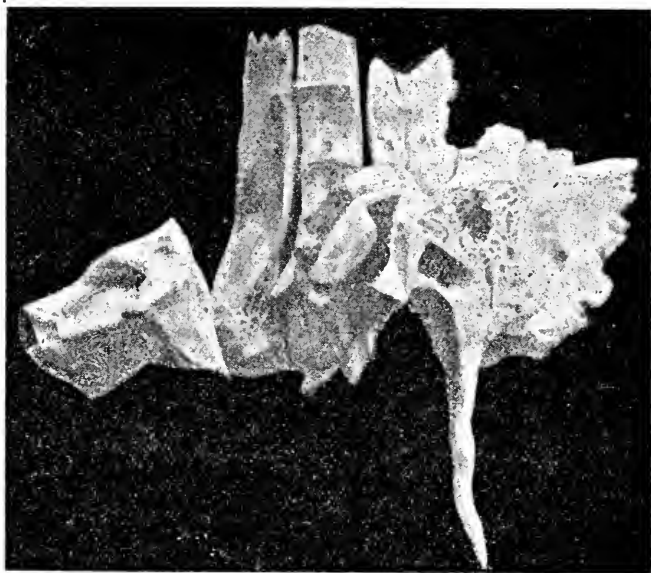


Fig. 3.

parts, of which the external is labelled No. 4. It shows in section the mastoid cells, and the posterior and anterior walls of the external auditory meatus.

Such are the three chief divisions that I regularly make in preparing sections of the temporal bone. By this method the bone is sawn into four principal pieces, in which many anatomical details are laid bare, while other points fall so near that it is easy to show them with secondary sections. In carrying out these latter we must bear in mind the principle of leaving the bone as much as possible in its entirety. Hence we should avoid the use of gouges, chisels, files, etc., which may destroy the parts, and simply use the watchmaker's saws for making further sections.

It is perfectly easy to put together again these four parts of a sectioned temporal bone. Three small hinges are fixed on the external surface of

the squamous bone (Fig. 1), (the first along the first cut of the first section, the second along the first cut of the second section, and the third along the second cut of the third section), and firmly maintain the temporal bone in its complete normal configuration, when the hinges are closed; when they are opened, the bone opens into its several parts, like the pages of a book (Fig. 3). This plan of union prevents loss and confusion with regard to the pieces of different temporal bones, and in no way damages or interferes with the clearness of the preparation. With regard to the subdivisions, which are always small and sometimes very delicate, I have succeeded in uniting them to the main piece to which they belong by means of small gummed ribbons. (*Vide* Fig. 3, piece No. 2.) These act like so many small hinges, and permit examination of the most minute and complicated parts. This system also offers the advantage of being easily removable, if necessary, without in any way injuring the small and delicate parts of the preparation. In this way I have been able to replace in position piece No. 2, after it has been subdivided into five fragments for the minute demonstration of the labyrinth.

StClair Thomson (*Trans.*)

SOCIETIES' MEETINGS.

AUSTRIAN OTOLOGICAL SOCIETY.

First Special Annual Meeting (OTOLOGENTAG), June 28th and 29th, 1896.

(*"Monatschrift für Ohrenheilkunde,"* July, 1896. Reported by Dr. JOSEPH POLLAK.)

(*Continued from page 256.*)

President—Prof. GRUBER.

Dr. R. SPIRA (Cracow). *A Case of Central Osteitis of the Mastoid Process running a Latent Course, and presenting the Symptoms of Trigeminal Neuralgia.*

This was a man seventy-three years of age, otherwise healthy and strong, and who for some time had suffered from chronic catarrh of the middle ear, subsequent to acute tympanitis following influenza. At the same time there came on severe pains in the neck, larynx, and corresponding half of the head. There was an accumulation of exudation in the tympanum, which was evacuated, after which the otitis ran through its usual course. The drum cicatrized in three weeks. There were no pains in the ear or mastoid process, but over the half of the head, occasionally propagated to the other side without obvious cause. A diagnosis of trigeminal neuralgia was made, and iodide of potassium and galvanism were ordered. Soon after the second sitting there occurred paralysis of the abducent nerve of the same side, with its typical consequences, diplopia and vertigo.

The patient suffered also from sleeplessness, loss of appetite, emaciation, and weakness, but no fever nor cerebral disturbance. Nothing was

observed in the ear or mastoid process. However, a few months later there occurred from time to time transient evidences of irritation in the mastoid region, accompanied each time with a diminution of the headache, the latter returning as the inflammatory symptoms subsided. After about eight months a sub-periosteal abscess on the mastoid process was opened: the cortex was found carious and perforated by a fistula. The fistula was enlarged, and in the deeper part of the bone there were found caries and pus. The bone was scraped out, plugged, and dressed antiseptically. After six weeks he was perfectly well, the headache completely disappeared, and the paralysis of the sixth nerve rapidly diminished.

The difficulty in this case was to decide upon the causal nexus between the neuralgic pains and the mastoiditis, also the relation of the abducent paralysis to the mastoid disease.

The question arises as to whether there was not, perhaps, an extradural abscess in the posterior fossa which was evacuated when the bone was laid open. The course of the disease and the result of the operation would give some support to such an opinion, and otherwise the occurrence and course of the paralysis of the sixth nerve would be more difficult to explain. Lastly, Dr. Spira asked whether those present could explain the combination of symptoms in the light of the anatomical changes which had been found.

Prof. URBANTSCHITSCH thought the abducent paralysis could be explained by the presence of the middle ear disease without the assumption of there being a sub-dural abscess.

He had in an exhaustive treatise drawn attention to the frequent occurrence of motor disturbances of the eye in cases of disease confined to the middle ear.

Dr. FRANCK-HOCHWART drew attention to the *post-mortem* examinations made by Darkschewitsch and Tarchanow, which explained paralysis of the whole facial nerve and of the abducent nerve on another basis. They found in such a case a neuritis of the nerves referred to without there being any other source of compression detectable, and they looked upon the neuritis as being of infectious origin and dependent upon a cario-necrotic process in the temporal bone.

Prof. URBANTSCHITSCH, in opposition to Dr. Franck-Hochwart, said that such motor disturbances could be brought about from some particular point in the meatus or middle ear, but that they could be of reflex nature.

Prof. POLITZER doubted very much the possibility of a reflex paralysis existing in this case, because if such were possible it would be observed more often in view of the great frequency of suppurative disease of the middle ear; while, on the contrary, it was one of the rarest events possible.

Prof. URBANTSCHITSCH said that, on the contrary, in a case of sudden paralysis of the abducent muscle occurring during the operation of extraction of polypus, paralysis remained permanent. The circumstance that pain occurred during catheterization made it probable that mucus was driven through the tube into the tympanum.

Dr. SPIRA remarked that what had led him to think of extra-dural abscess was the statement of Prof. Politzer that, according to his observation, frequent alternations and intermittences and recurrences of dangerous symptoms were the most important diagnostic indications of extra-dural abscess.

Prof. GRUBER was of opinion that this case was to be looked upon as one of disease of the mastoid process, such as is observed after influenza. He had drawn attention during the first influenza epidemic to the fact that the aurist had frequently to deal with the consequences of influenza in the mastoid, even when the influenza itself had long run through its course, because the microbes find in the mastoid cells a very favourable nidus for multiplying undisturbed and bringing about their usual injurious effects. He considered this point illustrated by the case under their notice.

Prof. POLITZER. *Ménière's Complex of Symptoms in a Case of Traumatic Lesion of the Labyrinth. Demonstration of the Histological Appearances.*

In the introduction to his address Prof. Politzer dwelt upon the importance of the anatomical examination in traumatic lesions of the labyrinth, with a view to the explanation of the accompanying disturbances of function, especially of Ménière's complex of symptoms which come on in consequence of these. In literature there is already a long series of cases of deafness resulting from concussion or fracture of the skull, but only two have undergone full anatomical investigation, one by Voltolini and the other by himself. In both the fissure at the base of the skull went right through both pyramids as far as the inner wall of the tympanum, and without visible lesion of the tympanic cavity. The bleeding occurring in the labyrinth brought about deafness and Ménière's symptoms. Histological examination of traumatic affections of the labyrinth are up to the present unknown.

He was now in a position to demonstrate the histological appearance in a case observed thoroughly during life. The subject was a shoemaker aged twenty-one, on whose head, on the 28th December, 1895, a bushel of mortar fell, rendering him unconscious. He was taken into Prof. Dittel's surgical wards, where consciousness returned after three days, but he remained totally deaf, and his gait was unsteady and reeling. On the 17th January he was transferred to Prof. Krafft Ebing, who found right-sided paralysis of the facial nerve, paralysis of the right half of the soft palate, loss of sense of taste in the right half of the tongue, a reeling gait, with a tendency to fall to the left side, and some defect of intelligence. The organs of hearing were examined on the 24th January, and on both sides there was found retraction of the somewhat opaque membranes, and complete deafness for every kind of noise or tone. On the 31st there suddenly occurred severe feverish symptoms, with diffuse pain in the head, vomiting, and dulness of the sensorium. The cerebral symptoms increased during the following days, and there developed at the same time a purulent middle-ear suppuration in the right ear, with bulging of the tympanum. Paracentesis gave vent to a

quantity of pus, but the cerebral symptoms were not thereby affected, and three days later death took place, apparently from diffuse meningitis. The details of the course of the disease up to the fatal ending have been communicated by Dr. Joseph Hirschl.

On *post-mortem* examination there was found purulent meningitis and a fissure at the base of the skull which went through both petrous bones, but only extended as far as the inner wall of the tympanum. There was empyema of the sphenoidal and of both maxillary sinuses, purulent exudation in the right tympanic cavity. The fissure passing through the petrous bone went on both sides two millimètres behind the internal auditory meatus, as far as the upper edge of the petrous, and it could be followed from here on the upper surface of this bone as far as the tegmen tympani. On the right side it passed through the greatest diameter of the cochlea, and on the left side through the lowest cochlea whorl. There was blood-stained exudation in both cochleæ. The microscopical examination of the decalcified labyrinth showed, on the right side, both scalæ of the cochleæ were, in all their turns, filled with an exudation, partly of fine granular nature, partly consisting of round cells; in various parts of the endosteum there was a growth of nucleated connective tissue. The details of Cortis' organ could not be distinguished. The nerve fibres of the modiolus, the spiral membrane, and the spiral ganglion were invaded by fine granular substances and nuclear cells. Similar places of exudation to those in the cochlea were found in the utricle, in the ampulla, and in the semicircular canals. On the outer side of the membranous ampullæ and semicircular canals there shot up nucleated, neoplastic, connective tissue.

In the left labyrinth there was much less free exudation than in the right. On the other hand the scala tympani of the first turn of the cochlea showed a fine, reticulated, new connective tissue, which contained numerous spindle-celled nuclei, and along with them, here and there, wandering cells; processes from the new connective tissue to the endosteum were found also in the second turn of the cochlea and in the cupula. Cortis' organ was rendered unrecognizable by the enormous proliferation of epithelial tissue. The bundles of nerves of the ramus cochleæ showed the same changes as on the right side. In the vestibule there were here and there thickenings of the endosteum, as also in the ampulla and the semicircular canals. The membranous structures of the vestibule and semicircular canals showed very little change.

In considering this case Prof. Politzer thought that the total deafness, as well as the occurrence of Ménière's symptoms, were quite explained by the anatomical appearances. The empyema of the sphenoidal and maxillary sinuses, as well as the purulent inflammation in the right ear, were, without doubt, the results of the suppurative inflammation of the pharyngeal tissues, produced by the fracture of the base of the skull. Nothing definite can be said with regard to the occurrence of the meningitis. Whether it was the result of the empyema of the sphenoidal sinus or of the purulent middle-ear inflammation, or of lesion of the meninges not detectable by the naked eye, could not be made out. A point of especial interest in the histological examination is the evidence of an intense

inflammatory formation of new connective tissue five weeks after the injury which gave rise to it. Prof. Politzer elucidated the description by means of a number of large charcoal drawings and the demonstration of the histological preparations.

Prof. GRUBER. *On Otitic Intracranial Affections.*

Prof. Gruber referred to the insufficiency of subjective as also of objective morbid signs and symptoms in connection with the topical diagnosis of intracranial process. On this account there had recently been made very complete studies of the statistics, and also endeavours to place these at the service of practical otology.

Valuable works had been published within recent years by Körner, Forselles-Robin, and more particularly quite recently by Hessler. Prof. Gruber had endeavoured to turn to advantage in this direction the large amount of material afforded by the General Hospital at Vienna. He was indebted to Prof. Weichselbaun for having placed the records of the *post-mortem* examinations at his disposal; also to Drs. Alt and Steiner for their assistance in analyzing the records of the sections dating from the 1st January, 1873, to the 1st December, 1894, and numbering 40,073. The year 1873 was selected because it was first in this year that the otological clinics were established, so that the changes in the organs of hearing were studied more carefully than was previously the case.

The following were the chief questions which he desired to solve, and the answers afforded by the results of these examinations.

Question 1. What is the proportion of the number of deaths from intracranial inflammatory affections to the total of 40,073? It was found that 1806—1242 men, 564 women—that is to say, 4·5 per cent., died from one or more intracranial inflammatory affections.

Question 2. What is the relation of the number of the inflammatory intracranial diseases obviously of otitic origin, compared with that of the simple diseases of this character not arising from any such cause? In reply it was found that the otitic origin was present in 232 cases—163 men, 69 women—that is to say, that out of the total of 1806 cases of intracranial affection, they amounted to 12·8 per cent., and in relation to the grand total of *post-mortem* examinations—40,073—0·58 per cent. Out of these 232 cases, 81 cases were followed to the autopsy by otologists, the remaining ones came from the surgical and medical departments; therefore, 34·91 per cent. of them by otologists, 65·09 per cent. by resident medical officers and surgeons. In regard to this question, Prof. Gruber remarked that he was quite convinced that, in a considerable number of cases of inflammatory intracranial disease, the connection with otitis was overlooked, and either did not come to section, or the relation to otitis was missed because there was no idea of its presence. This must also be the case in other institutions. If, therefore, the statistics in this direction are not quite exact, they are at least of the same value as those brought forward by other authors.

Question 3. What is the relation of these secondary otitic intracranial inflammations which were dissected to the age of the patients? It must here be mentioned that in the general hospital at Vienna

children under six years are only very exceptionally admitted. They are treated in the children's hospitals. In the great number of *post-mortems*, therefore, there is found only one of a child of three months old, and one of a child of one month. The age of the others is shown in the following table :—

	Males.		Females.
From 5 to 10 years	0	.....	2
10 „ 20 „	53	.....	14
20 „ 30 „	46	.....	26
30 „ 40 „	30	.....	12
40 „ 50 „	22	.....	4
50 „ 60 „	13	.....	4
60 „ 70 „	3	.....	1

From this it will be seen, as was already pointed out by the author in January, 1862, that purulent middle ear inflammation is most dangerous in individuals between the ages of puberty and of fifty, and that in the earlier and later ages life is less threatened.

Question 4. On which side was the ear disease in the 232 cases which came to *post-mortem* examination?

Answer—

Right ear	118	.....	= 50'87 per cent.
Left ear.....	103	.....	= 44'39 „
Both ears.....	6	.....	= 2'59 „
Not stated	5	.....	= 2'15 „

Question 5. Of what nature was the ear disease in the 232 bodies? In answering this question Prof. Gruber ranges the cases into two categories. First : Those in which only the soft parts of the middle ear were affected. Secondly : Those in which caries or necrotic disease of the temporal bone was present.

Intracranial secondary inflammatory affections were found in simple suppurative otitis media without caries 65 times (44 males, 21 females), equal to 28 per cent.; whereas, in those complicated with caries, 167 times (128 males, 39 females), equal to 72 per cent. It will be seen from these enumerations that in the simple as well as in the carious cases, the frequency was greater in men than in women, but simply for the reason that the primary affection was more frequent in the male than in the female sex.

Question 6. Involvement of the vessels. In the first place it appeared to Prof. Gruber of importance to take notice of the disease of the blood vessels of the dura mater, as it was well known that these frequently acted as the intermediary between the primary disease in the organ of hearing and the inflammation of the brain and its membranes. It was, therefore, incumbent to note how often sinus affections occurred altogether in the 232 cases, which sinus was affected, both in simple middle ear inflammation and in cases complicated with caries. Finally, what kind of thrombus was found in the different cases. The following tables show these points :—

SUPPURATIVE MEDIAN OTITIS, SIMPLE (WITHOUT CARIES).

Nature of the Sinuses Affected.	Solid Thrombus.						Total.	Suppurating Thrombus.						Total.
	Males.			Females.				Males.			Females.			
	R.	L.	B.	R.	L.	B.		R.	L.	B.	R.	L.	B.	
Sigmoid Sinus.....	3	2	..	1	2	..	8	2	2	..	1	2	..	7
Transverse Sinus alone or with the Sigmoid	3	..	..	2	..	..	5	3	..	..	1	..	..	4
Cavernous Sinus and its Appendages	3	1	..	..	..	..	4	1	1	..	..	1	1	4
Superior Petrosal and Sigmoid Sinuses .....	..	..	..	..	1	..	1	..	..	..	..	1	..	1
Superior Petrosal and Transverse Sinus .....	..	..	..	1	..	..	1	..	..	..	1	..	..	1
Sinus of Jugular Vein and Transverse Sinus.....	1	..	..	..	..	..	1	..	..	..	..	..	..	..
Sigmoid, Transverse, and both Cavernous Sinuses	1	..	..	..	..	..	1	..	..	..	..	..	..	..
Sigmoid Sinus and Jugular Vein	1	..	..	..	..	..	1	..	..	..	..	..	..	..
Cavernous Sinus.....	..	..	1	..	..	..	1	..	..	..	..	..	1	1
Transverse and Cavernous Sinuses and Jugular Vein...	1	..	..	..	..	..	1	1	..	..	..	..	..	1

SUPPURATIVE MEDIAN OTITIS (WITH CARIES).

Nature of the Sinuses Affected.	Solid Thrombus.						Total.	Suppurating Thrombus.						Total.
	Males.			Females.				Males.			Females.			
	R.	L.	B.	R.	L.	B.		R.	L.	B.	R.	L.	B.	
Sigmoid Sinus.....	5	11	1	..	2	..	19	3	8	..	..	1	..	12
Transverse Sinus alone or with the Sigmoid	5	13	..	5	2	..	25	4	8	..	3	2	..	17
Sigmoid and Longitudinal Sinuses .....	..	1	..	..	1	..	2	..	1	..	..	..	..	1
Sigmoid Sinus and Jugular Vein	4	3	..	1	1	..	9	2	3	..	..	1	..	6
Bulb of Jugular Vein.....	..	1	..	1	1	..	3	..	1	..	..	1	..	2
Sigmoid and Transverse Sinuses and Jugular Vein...	1	1	..	1	..	..	3	1	1	..	..	..	..	2
Cavernous Sinus .....	..	..	..	..	..	1	1	..	..	..	..	..	1	1
Sigmoid and Reil's Sinuses ..	1	..	..	..	..	..	1	1	..	..	..	..	..	1
Cavernous and Petrosal Sinuses .....	..	..	1	..	..	..	1	..	..	..	..	..	..	..

The total of cases without caries, which were dissected, and in which sinus thrombosis was found, amounted to 42 (24 with solid, 18 with broken-down suppurating clot). The total of those with caries, showing sinus thrombosis, amounted to 106 (64 with solid, 42 with a purulent breaking-down clot). The sinuses most frequently affected were the sigmoid and transverse [lateral, D. G.], and this occurred 24 times in the 42 cases without caries, and 73 times in the 106 with caries; according to sex, 73 males and 24 females.

Question 7. What consecutive affections were found in the brain and its membranes in the 232 cadavers? The writer here again distinguishes cases according to whether caries was present or not.

In simple otitic processes, without thrombus in the sinus, there was found :—

Meningitis31 = 13 per cent. (21 men, 10 women).

Cerebral abscess ...19 = 8·2 „ (14 men, 5 women).

Cerebellar abscess... 1 = 0·4 „ (1 woman).

In simple otitic disease, in which there was a thrombus in one of the sinuses :—

Meningitis12 = 5·5 per cent. (7 men, 5 women).

Cerebellar abscess... 2 = 0·8 „ (2 men).

In those cases in which there was caries of the temporal bone, but no sinus thrombosis :—

Meningitis40 = 17 per cent. (34 men, 6 women).

Cerebral abscess ...13 = 5·6 „ (12 men, 1 woman).

Cerebellar abscess .12 = 5·5 „ (8 men, 4 women).

In those with caries and thrombosis :—

Meningitis21 = 9 per cent. (17 men, 4 women).

Cerebral abscess ... 7 = 3 „ (6 men, 1 woman).

Cerebellar abscess . 4 = 1·6 „ (2 men, 2 women).

Meningitis with cholesteatoma 8 = 3·2 per cent. (6 men, 2 women).

Three died of pyæmia out of those without caries, but with otitic sinus thrombosis, 16 (11 males, 5 females), equal to 6·8 per cent. ; and of those with caries and thrombosis, 32 (22 males, 10 females), equal to 13 per cent.

The material obtained from the records of the *post-mortems* has been analyzed from various other points of view, regarding which Prof. Gruber proposes to publish further particulars.

Prof. POLITZER. *Contributions to the Operative Opening of the Cavities of the Middle Ear.*

In the introduction to the paper, Prof. Politzer referred to the important advances which had been made in aural surgery, through the improvements in the methods of laying open the cavities of the middle ear by operation. The value of these will only be known later on, when the indications for their adoption are more precisely defined than at present. Prof. Politzer thinks that at present operations are carried out by many without strict indications, and before endeavours have been made to cure the suppuration by the customary methods of treatment.

The anatomical structure of the temporal bone, and the extension of pneumatic spaces into its furthest parts, favour the establishment of persistent foci of suppuration and of deep burrowing diseases of the osseous structures. To this must be added the manifold mechanical obstructions to the flow of pus from the outer meatus, the frequent development of cholesteatoma, and the destructive character of certain pathogenic micro-organisms—diphtheria, tuberculosis, etc. In spite of all this, spontaneous recovery is not uncommon, as is shown by the formation of fistulæ on the mastoid process, with the ejection of sequestræ, the formation and epidermization of extensive defects of bone in the outer attic and the postero-superior wall of the meatus, with cessation of suppuration. Prof. Politzer showed a skull in which, as the result of chronic middle ear suppuration, the outer wall of the attic and the postero-superior wall of the osseous meatus had been destroyed, and in which a large cavity had been formed, made up of the external meatus, the

tympenic cavity, and the mastoid antrum, while exit of the secretion was rendered perfectly free. The bone defect in this preparation was almost identical in its anatomical relations with that produced artificially in operative opening of the spaces of the middle ear. The principle of the operation, for the introduction of which into practice we are indebted to Küster, consists in the removal of the postero-superior wall of the osseous meatus and the outer wall of the attic, whereby the removal of carious ossicles, the clearance of granulations, cholesteatomatous masses, and carious areas of bone from the tympanic cavity and the mastoid process are rendered possible, and the conditions favourable for the cessation of suppuration in the temporal bone are established.

After a cursory view of the historical development of these operative procedures, now practised for six years, Prof. Politzer referred to the indications which he looked upon as one of the most important points in connection with the operations in question. These depend upon the objective appearances in connection with the subjective symptoms which indicate the development of complications dangerous to life. The writer discussed, in sequence, the indications for laying open the middle ear, dwelt upon the importance of certain appearances of the drum in the diagnosis of antral suppuration and of cholesteatoma formation in the attic and mastoid, and recommended the more frequent use of the pneumatic speculum for the determination of the seat of the suppuration. The number of cases operated on by Prof. Politzer in his clinic and in his private practice, for the opening of the cavities of the middle ear, amounted to fifty-three. In this number there are not included the acute cases, and those of typical trephining of the mastoid (Schwartz) for chronic suppuration. With this enumeration are a number of cases observed which had been operated upon in his clinic by Drs. Gompertz and Kauffmann, and some elsewhere, in which he had the opportunity of judging of the results of operation. The analysis of cases operated on by Prof. Politzer is as follows :—

In four cases the cavities of the middle ear were laid open in patients in whom, some considerable time before, Prof. Politzer had performed Schwartz's typical operation, and in which recurrences with persistent suppuration had taken place ; and in nine other cases of recurring middle ear suppuration, in which the opening of the mastoid according to the typical method had been carried out by other aural surgeons. In eight cases there was, along with profuse fetid otorrhœa or granulations or cholesteatoma in the tympanum, pain in the mastoid process without swelling of the outer integuments ; twelve times pain with swelling of the skin and periosteum of that process. In eleven cases there was a sub-periosteal abscess over the mastoid, the walls of which were lined with granulations ; of these, seven had a fistulous opening in the cortex leading into the interior of the mastoid, four with no such fistula.

In eight cases there was an open fistula on the mastoid process with spontaneous dehiscence of the cortex ; in five, a fistulous opening in the posterior wall of the meatus, through which a probe could be introduced either into the antrum or into a cavity in the mastoid process filled with granulations. Extreme narrowing of the meatus from hyperostosis of the

osseous part and (unyielding) hypertrophy of the lining of the meatus was present in seven cases. In fifteen cases there was, besides the local pain in the ear or mastoid, headache, fever, occasionally sleeplessness, vertigo, and vomiting. With facial paralysis of longer or shorter duration, there were six cases which came under operative treatment, and of these three were affected with tuberculous caries of the mastoid and tympanum, with or without formation of sequestræ.

Prof. POLITZER. *A Description of the Method of Operation, and of the Modifications indicated by the different Pathological Conditions in the Temporal Bone.*

Prof. Politzer gave a sketch of the appearances found by him after laying open the cavities of the middle ear.

In about half the cases there were found masses of cholesteatoma in the tympanic cavity, in the antrum, and in the mastoid process. In fourteen cases there was immediately beneath the cortex an extensive cavity in the mastoid process, with simultaneous cario-necrotic defects in the postero-superior wall of the meatus. The cavity was filled with discoloured granulations, fragments of bone, or greasy, caseous masses. In three cases the postero-superior wall of the osseous meatus was completely lost; in five the mastoid process and the postero-superior wall were densely sclerosed. The transverse sinus was exposed to a varying extent from suppurative disease in four cases. In three cases the dura mater was exposed, once above the mastoid antrum, twice above the tegmen tympani.

In the majority of the cases the antrum and the walls of the tympanum were affected by disease of bone; the malleus and incus generally absent. On account of these conditions Prof. Politzer operated of late years chiefly according to Küster's method. Schwartz's typical opening is advisable where the hearing power is relatively good, as this is apt to be diminished by laying open of the middle ear and removing the ossicles. As regards accidents in the operation, severe hæmorrhage, from granulations or from the vessels in the bone, or from an emissary vein of Santorini, was easily checked by plugging. Once the dura mater was exposed without this producing any unfavourable effect on the reparative process. In one case during the scraping of the attic the horizontal part of the facial nerve was injured by the sharp spoon; the paresis of the facial nerve which ensued disappeared entirely after several months. In two cases in which before the operation there was paralysis of the facial nerve this entirely disappeared after healing took place. In no instance was the horizontal semicircular canal injured. The plastic methods varied according to the anatomical conditions found in the individual cases. Most often the posterior cartilagino-membranous wall of the meatus was split longways, and in order to make as wide an orifice to the meatus as possible, one flap was stitched above and the other below to the external cutis. Several times Körner's flaps were employed with good results, as also Thierch's method of transplantation. In cases of granulations in the middle ear and of cholesteatomata of small size in the antrum, Prof. Politzer allowed the operative wound behind the ear to close; but when there

were active cholesteatoma cavities in the mastoid process he kept the artificial orifice open, to allow of the more ready inspection of the seat of the disease and of the more thorough cleansing of the cavity.

As regards the result of this operative opening of the cavities of the middle ear, Prof. Politzer is of opinion that the views of many operators with regard to the cessation of the discharge after the operation—50 per cent. to 75 per cent.—are too optimistic, as the length of observation is, on the whole, still too short, and cases have occurred in which recurrence of the discharge took place after two or three years. Cholesteatoma are known to recur almost without exception. The term “radical” operation is therefore not absolutely exact of the cases operated on by him; in seventeen the suppuration had ceased for a considerable time, the remaining cases are still under observation, and the ultimate result cannot yet be determined. A certain number, as usual, have disappeared from observation. Further operations were carried out seven times. In one case the external meatus was quite closed. The duration of treatment was in general shorter than in cases of the typical opening of the mastoid process, but still required, as a rule, several months. Hearing power was generally improved by the operation, but in rare cases made worse. As after the typical mastoid opening, so also after this operation, the troublesome head symptoms were relieved and improvement in general health observed. Fatal results were observed in six cases—three times from pyæmia, which was already present before the operation; twice from chronic tuberculous otitis; and once from a cerebral abscess, without symptoms, which was present before the operation.

Prof. Politzer can only understand the extremely favourable results from this operation reported by other operators on the supposition that, without careful choice, many cases had been operated on in which there existed chronic otorrhœa without any deep-seated changes in the temporal bone, and in which the ordinary methods of treatment had not previously been tried. Such cases must obviously heal in a short time. High as is the value of these operative procedures, and life-saving as he holds the operative exposure of the cavities of the middle ear to be in many cases, he insists that these proceedings should be strictly confined to cases in which strong indications are present.

Prof. URBANTSCHITSCH. *On the Operative Exposure of the Middle Ear.*

The writer had within the last two years, from October, 1894, to the present time, observed 72 cases of the so-called radical operation in the middle ear. Of these 6 occurred in cases between the ages of 6 and 10; 17 between 11 and 15; 18 between 16 and 20; 11 between 20 and 25; 7 between 26 and 30; 7 between 30 and 40; 4 between 40 and 50; and 2 between 50 and 60. The duration of the purulent middle-ear inflammation had been, in 50 cases, from 1 to 10 years; in 15 from 10 to 20; in 6 from 20 to 30; and in one 32 years. Out of these 72 cases, 47 had simple caries, 13 caries and cholesteatomatous foci, and 12 pure cholesteatoma. The *mastoid antrum* showed in 42 cases no striking enlargement, in 12 it was abnormally small, in 18 abnormally large; in 5 of the latter the enlargement was “colossal,” namely, in 5 cases of cholesteatoma.

The writer remarked that the enlargement of the mastoid antrum took place at the expense of the cranial cavity. In 9 out of the 72 cases the disease extended to the *dura mater* (6 times towards the cerebellum, thrice above the tegmen tympani). In one case the dura above the tegmen was perforated, and *cerebral tissue* projected into the attic; in spite of this the patient got well. In another case cerebral tissue was found in the syringing water, and, as the operation showed, it came from the cerebellum, which had projected into a large cholesteatomatous cavity in the mastoid, which had also broken through into the meatus. His case also recovered. The transverse (lateral) sinus was frequently exposed, once in almost its whole extent as far as its passage into the bulb of the jugular vein; in many cases it was exposed by operative measures. In one case Prof. Urbantschitsch opened it, but found the sinus empty, and in its lower part thrombosed. The malleus and incus were found as follows:—

Out of the 72 cases the malleus was healthy in 8, carious in 62, absent in 2; the incus was healthy in 6, carious in 63, absent in 3; in two cases of caries there was an osseous ankylosis of these two ossicles. The *facial nerve* was in one case completely paralyzed before the operation, and in several cases paretic. The paresis disappeared quickly after the operation; the case with paralysis underwent no marked improvement. During the operative proceedings facial paralysis occurred in no instance, but in 6 it came on one or two days after the operation, but only lasted for a time. In one case the facial paresis affecting the upper eyelid passed over into a facial spasm.

Among the notable accidents during the operation Urbantschitsch mentioned the occurrence of severe arterial bleeding in two cases (from the region of the middle meningeal artery); once this required compression for ten minutes to stop it, and in the other case the operation had to be stopped and completed five days later. In the case of a girl, aged eight, there followed during the curetting of the left ear violent chronic spasms of the upper and lower extremity of the opposite side, and further spasmodic flexion of the fingers of that hand; these symptoms recurred several times during the day of the operation, but the case ended favourably. In a girl, aged eighteen, there came on after the operation general convulsions, which were repeated, but they were recognized at once as being of an hysterical nature, and the case progressed satisfactorily. In the case of a boy, aged eleven, a large sub-dural abscess was found in the occipital fossa. The case got well.

As regards the operative technique, the writer made the ordinary crescentic incision near the insertion of the auricle. The chiselling was carried out usually in the way described by Zaufal, but he never went higher than the upper margin of the meatus; the cutis of the osseous meatus was sometimes raised on the posterior and superior wall, sometimes used as a guide for the inexperienced operator while working towards the deeper parts. In other cases Prof. Urbantschitsch removed the upper and posterior part of the tympanic ring according to Stacke's method, and worked his way outwards towards the mastoid antrum. In favourable topographical circumstances safe points for guidance are in

this method presented to the inexperienced operator. For those who have had much practice in it it is immaterial what method of opening is employed, and the writer usually follows Zaufal's method. He then described the method of curetting and transplantation of skin. In several cases he had carried out the Thierch-Ziebertmann method with partial success, probably on account of the use of the pressure method, which he describes later on; on the other hand he had had very excellent results from the use of the cutis of the posterior wall of the meatus as recommended by Körner, more especially when only one incision was carried through the cuticulo-cartilaginous meatus as far as the external orifice, at which point two vertical incisions were carried upwards and downwards respectively so as to form flaps in the meatus (Panse).¹ The flaps were either attached by means of stitches or else by tampons, so that the artificial cavity was kept open as far as the outer orifice of the meatus, from which it could be easily examined.

The after treatment is looked upon by Urbantschitsch as the more difficult part of the radical treatment, and he attaches great importance to a skilled manipulation of the patient for several months. In the first rank comes the prevention of granulation formation and the destruction of granulations (too exuberant) when formed.

The tendency to the formation of granulations is to be combatted by continuous pressure upon the walls of the cavity exercised by means of a firm tampon. *The destruction of granulations* is effected by means of cauterization with crystalized chromic acid, and this has to be practised with due regard to the tendency to reaction in the individual under treatment.

As regards *the retro-auricular* opening, Urbantschitsch acts according to the nature of the case. In simple attic disease he stitches up the wound completely; otherwise he keeps a large fistulous opening by means of iodoform gauze, or a solid india-rubber cylinder, large enough to admit the little finger, until the tendency to granulation formation has passed, or is only slight and very little secretion remains. He is opposed to a permanent opening from cosmetic and social reasons, and more particularly since he has been able to obtain access to large cavities through the auditory meatus in cases in which he has slit up the soft parts of the meatus and turned back the flaps. It is only, then, in cases of very extensive caries, or in patients who are going to a distance, to places where skilled treatment cannot be carried out, that he has resort to the preservation of a permanent retro-auricular opening.

As regards the result of the treatment, he can give no positive statements on account of the short period of observation, which even in the longest of the cases has not extended over two years; but the following has been the *course* up to the present:—Of the 72 cases, 28 present a completely dry cavity, and this was attained in 13 cases in from 6 to 12 weeks; in 8 cases in from 3 to 4 months; in 4 cases in from 5 to 6

¹ This description does not tally with that which we are accustomed to recognize as Panse's method and which that writer describes in the "Arch. für Otol." This roughly consists of the formation of a tongue of soft tissue from the postero-superior wall of the membrano-cartilaginous meatus by means of two parallel incisions in the direction of the meatus. This tongue is turned backwards, so as to cover the outer part of the posterior wall of the artificial cavity formed by the chiselling operation.

months ; in 3 cases in 7, 12, and 16 months respectively. In 19 other cases, of which 12 have been under observation for 6 months, and 7 longer, the cavity is completely dry ; but there is occasionally a little secretion, even after a cessation of secretion for several months, but only in small quantity. In 4 patients the carious process has not yet been brought to a standstill ; 8 operated on in May and June of this year showed a satisfactory course as regards the operation wound ; 8 withdrew from further treatment ; 5 died, and of these 3 from meningitis, which was already present at the time of operation, one of abscess in the left temporo-sphenoidal lobe without localizing symptoms, and one of metastatic pneumonia.

The operation had extremely favourable results as regards *headache, vertigo, faintness, and the general bodily condition*. Out of the seventy-two cases, forty-two had had such symptoms ; among them was one of cholesteatoma with optic atrophy and marked contraction of the field of vision, which improved in a most striking way after the operation. Prof. Urbantschitsch dwelt further upon the favourable influence of the operation on the mental and nutritive functions, and further upon the *hearing power*, which sometimes was considerably improved. The writer pointed out how frequently the great danger threatening life was only discovered after the opening of the cavities of the middle ear. He concludes with the following words : "The more frequently cases of chronic suppurative inflammation of the middle ear, as also of cholesteatoma of the middle ear, are subjected to radical operation, the more clearly is the great value of this method of treatment impressed upon us, and so much the further does experience teach how wonderfully the operative interference is borne by the patient ; also what favourable influence it exercises in different directions ; and, in point of fact, the operative opening of the cavities of the middle ear must be described as one of the most life-saving proceedings in aural surgery."

Dr. GOMPERTZ agreed with Profs. Politzer and Urbantschitsch in looking on the radical operation of the cavities of the middle ear as a life-saving procedure, but he insisted along with Prof. Politzer that the indications for the operation should be limited in the most precise manner. In particular, he dwelt upon the necessity of attention to the hearing power, because any interference with this handicapped the patient very severely in his social relations, and in cases in which the other ear was already useless for hearing, the widest scope should be afforded to conservative methods. As regards the question whether in deeper extending disease, caries and cholesteatoma, the retro-auricular opening should be closed or kept free, he thought it could only be solved by further observations. In general he preferred the plastic method recommended by Körner, and as much as possible he avoided the establishment of a lasting retro-auricular opening ; but he was bound to admit that in cases in which such an opening was kept the new epidermis gave him the impression of being more solid than in cases in which Körner's method was adopted, and he thought that the constant contact with the outer air was of advantage in securing the stability of the healing process. In order to assure the safety of the stapes he advised that the tendon of the

tensor tympani and the incudo-stapedio joint should be divided before the detachment of the auricle, because after this the field of operation was too much obscured by the hæmorrhage. For retracting the detached meatus he had found a gouge most suitable, and he recommended the use of a blunt hook hollowed out after the fashion of that instrument.

He had in one case observed tetanic contractions after the operation, but in this the anæsthetic had been administered for an hour, and the contractions soon stopped after the patient got warm in bed.

In the after treatment he recommended very strongly, in cases in which Körner's plastic method had been adopted, the use of sterilized vaseline oil. After the removal of the first dressing, cleansing and drying of the meatus, he filled this with oil, and then plugged it with iodoform gauze.

Prof. URBANTSCHITSCH, in reply to Dr. Gompertz, said that the hearing power in his cases was bad before the operation, and that after it in quite a number of cases it was improved. The operation was practised upon cases which had been long under treatment, and in which the appearances found at the operation indicated its necessity. As regards the indications it was difficult to fix them with precision, as not unfrequently it was found that the disease had extended deeply into the middle of the ear, and the mastoid process as far as the dura mater and the sinus, although no particular symptoms were present, and the patient's appearance was that of perfect health. The detachment of the posterior wall of the meatus gave rise to no great amount of hæmorrhage, and as he preferred to have as free a field of operation as possible for the separation of the incudo-stapedial joint, he therefore preferred first to remove the partition between the meatus and the mastoid. Periosteal stitches were always inserted when it seemed necessary. As regards the flap formation, he referred to his opening remarks.

Dr. KAUFFMAN advised in cases of cholesteatoma, especially when extensive or recurrent, the formation of a persistent opening behind the ear. The splendid results which he had seen from this method in Schwartz's clinic in Halle had determined him to practise the operation on a few patients in whom these indications were present; and, in particular, he called the attention of those present to a patient who, some years previously, had been operated on in Prof. Gruber's clinic, and in whom, in the September of the previous year, a recurrence had taken place with severe symptoms. After the establishment of a persistent large opening, the improvement which had taken place illustrated the great advantage of this method of operation.

Prof. POLITZER was of the opinion that, in this direction, it was necessary to specialize. When the cavity was small and there was granulation in the middle ear, the opening in the mastoid might be allowed to close. On the other hand, in the case of large cholesteatomatous cavities, the cosmetic objects had to be left in the background, and a persistent opening maintained, so that the patient might be in a position to wash out the cavity in the temporal bone, completely. If the opening is allowed to close, then the patient is under the necessity of seeking the help of a surgeon at short intervals.

Prof. GRUBER expressed his opinion that the term, "radical operation," should be done away with, as conveying no meaning. The typical operation of Schwartze, when it removes the whole of the decided tissue, is quite as radical as any other, even though not so deep. Without attacking anyone, he felt that, in many cases, too much was done. In all cases his plan was, if the presence of disease in the deeper parts of the bone was not very obvious, to perform, in the first instance, Schwartze's operation, and when in the course of the operative procedures the necessity showed itself, he then went still further. On the whole he operated frequently, and was very satisfied with the results. He objected to the maintenance of a permanent opening in the mastoid region, unless there was the most unmistakable necessity for it.

Dr. FERDINAND ALT. *On Apoplectiform Labyrinthine Disease in Caisson Workers.*

Dr. Alt had the opportunity of studying the aural disturbances which occurred in caisson workers, during the progress of certain constructions under the water-level of the Danube. The number of the cases was very large, and he confines himself to the description of the three most severe which came under his notice. These three men had worked, during the prescribed part of four hours, under a pressure of from 2.2 to 2.4 atmospheres, and while they were in the caisson they felt perfectly well. The typical symptoms of Ménière's disease appeared in these men: in one at the end of an hour, in another in thirty-five minutes, and in the third in one and a-half hours after leaving the caisson. They had complete deafness, and continuous severe vertigo. In all three there was found well-marked retraction, and more or less pronounced livid discoloration of the membrane, along with congestion of the vessels of the malleus. The tuning-fork tests indicated labyrinthine affection on both sides. In two of the patients there was complete deafness of the left side, and in the third on the right side. This remained continuous, while in the other ear a slight trace of hearing power was preserved, and improved within a few days. As regards the circumstances under which ear disturbances occur in caisson workers, the writer mentioned that men working in a space in which there is, for example, a pressure of two atmospheres, have to practise movements of swallowing and Valsalva's method of inflation (which they do instinctively), in order to drive air into the middle ear and to equalize the pressure in that cavity and outside it. When this succeeds they can go on working in complete comfort, but if the Eustachian tubes are obstructed they get severe pain and other subjective discomforts in the ear, and they are obliged to leave the caisson. Occasionally, in spite of Valsalva's method not succeeding, they persist in remaining in the caisson, and, as a result, their organs of hearing suffer severely.

When the Eustachian tube is quite impermeable there is in the auditory meatus a pressure of $1 + 2$ atmospheres, and in the middle ear of one atmosphere only (or even less, on account of the rarefaction of the air resulting from Eustachian obstruction); hence there is in the middle ear a negative pressure, the membrane is drawn inwards, the vessels find

a place of less resistance, they dilate very markedly, and as the result of the obstruction to the exit of the fluids into the neighbouring parts owing to the pressure, there is a passive hyperæmia in the middle ear. As every increase of pressure in the middle ear leads also to a similar condition in the labyrinth, so rarefaction of air leads to a diminution of pressure in the internal ear (as proved by the manometrical investigations of Politzer and Bezold), and there results in the labyrinth a negative pressure with consecutive passive hyperæmia. By means of exhaustive studies of the disturbances of circulation Alt has proved that, as the result of this long continuous passive hyperæmia and the associated diminished nutrition of the vessels, there may occur a transudation, or it may be an actual hæmorrhage into the middle ear or labyrinth. In the slighter cases there was observed a retraction, and more or less pronounced injection of the membrane amounting at times to lividity. In a few of the cases there were ecchymoses in the membrane. Typical traumatic rupture of the drum was not observed. In the three very severe cases above mentioned the first idea was that there had occurred bilateral labyrinthine hæmorrhage, and it was only when the symptoms subsided with rapidity in one ear, the conclusion was arrived at that there was hæmorrhage and distraction of the tissues in one labyrinth only, whereas in the other the long-standing stasis had brought about transudation with secondary increase of pressure, so that the symptoms of labyrinthine disease were present, but disappeared when a readjustment of the secondary increase of pressure took place. In support of these views the writer alluded to the clinical symptoms on the one hand, and on the other to experiments upon animals which had been carried out in a high-pressure chamber constructed for the purpose. On the animals there were found ecchymoses of the membrane and hæmorrhage in the tympanum, or in some cases bullæ (Professor Gruber's experiment). In the microscopical preparations of the labyrinth which were shown at the meeting, it could be seen that the vessels were highly dilated, in some places even to double their natural size, and tightly packed with blood corpuscles (especially in the modiolus of the cochlea).

Dr. Alt then discussed the reason why the severe affections did not come on in the caisson, but only some time after leaving that chamber, and he attributed this circumstance to the changes in blood pressure, of which he demonstrated a number of curves. In the cases described he attributed the changes to pure mechanical causes brought about by the difference of pressure in the middle ear and the surrounding cavities, and he opposed the view that the symptoms were due to central disturbances on account of the negative results of examination of the nerves. Finally he gave a short account of the air bubble theory, and quoted a fatal case of air embolism in a caisson worker, in which there were numerous capillary hæmorrhages in the brain, and spinal cord. He asserted the possibility of the occurrence of labyrinthine hæmorrhages through the entrance of air bubbles, but as regards the cases observed he depends alone upon the mechanical theory in view of the otherwise negative appearances.

Dr. JOSEPH POLLAK. *On Serous Perichondritis of the Nasal Septum.*

The patient was a robust and well-nourished man, aged fifty-three, who, without any obvious cause or any injury whatever, had for eight days suffered from complete obstruction of the nose, with the usual consequences: loss of nasal breathing, dryness of the throat, absence of resonance in the voice, etc. On examination the external orifices of the nose were found to be completely filled by two pale red tumours, which, at the first glance, simulated prolapsed nasal polypi. There was also on the dorsum of the nose, in the neighbourhood of the articulation, between the nasal bone and quadrangular cartilage, an elastic tumour of the size of a hazel nut, which had been incised a few days before by the doctor under whose treatment it was, and out of which there exuded under pressure a yellowish-white serous fluid of somewhat viscid consistency. When an endeavour was made to introduce the finger between the ala nasi and the bulging septum, so as to define the limits of the swelling and to test its consistency, the fluid spurted out like a fountain from the tumour on the dorsum of the nose; at the same time the tension of the tumour diminished, and the patient could for the moment draw breath through the nose. Next day the tumours were again fully distended, and the incision on the dorsum had healed. Dr. Pollak decided that the case was an undoubted one of the affection named by Jurasz serous perichondritis of the nasal septum, and determined to lay open the tumours without delay. After cocainization, the tumour on the left side was opened to the extent of one centimètre by means of the galvano-cautery, and two thimblefuls of serous fluid at once poured out. It was then found, as was expected, that there was a communication between the two tumours, and the use of the probe made it certain that the cartilage was broken through in a split-like way. After treatment was carried out by means of plugs of cotton wool soaked in ten per cent. Burrows solution. Complete healing took place in ten days, the nose became perfectly free; but there remained the characteristic depression of the dorsum of the nose peculiar to all forms of so-called perichondritis (phlegmon abscess of nasal septum), so that the appearance of the nose, which was previously a Roman one, was quite altered.

Dr. Pollak could not agree with Jurasz's view of the nature of such cases, that they were analogous to the perichondritis serosa described by surgeons (Ollier), and which usually occurs at the diaphysis of hollow long bones in young persons. The view expressed by Velpeau seemed to him much more plausible, who considered the disease which appeared to be the same as that described by Jurasz, to consist in a cyst formation in the septum. Fischelich avowed himself unable to give a sufficient explanation of the occurrence of serous perichondritis. Dr. Pollak thought that in serous perichondritis of the septum of the nose, just as in hematoma and the so-called acute idiopathic perichondritis of the septum, there was a primary diseased condition of the quadrangular cartilage analogous to that which Parreidt, Meyer, Gudden, and Pollak had described in the cartilage of the ear, and which was the condition predisposing to the occurrence of othematoma, namely,

degeneration of the cartilage, softening and splitting, the formation of cavities with homogeneous contents, increased and new formation of blood vessels. According to the nature of the injurious influence acting upon such degenerated cartilage, there resulted different forms of swelling of the nasal septum : thus, hæmatoma from injury, and the so-called acute idiopathic perichondritis (as Kuttner has correctly observed) from the immigration of pyogenic micro-organisms, and serous perichondritis from the rupture of cavities filled with serum. From these circumstances it will be obvious that in such cases the disease should affect both sides of the nasal septum.

Dr. GOMPERTZ. *On a Typical Change in the Tension of the Membrana Tympani in Valve-like Action of an Obstructed Eustachian Tube.*

The writer drew attention to a bleeding of the postero-superior quadrant, which now and then came under notice in membranes which were otherwise normal and without other disease of the tympanum. The patients in whom this anomaly is present generally complain of slight discomfort, such as a feeling of pressure or tension, or of slight subjective noises and occasional dulness of hearing. The appearance is very striking ; the colour of the membrane is the normal pearl grey, the light reflex is in its natural position, and the curvature of the three other quadrants is only very slightly altered. In the postero superior quadrant there is seen a marked bladder-like bulging, which at the part next the malleus stands out too sharply from the remaining portions of the membrane. On the periphery, near the wall of the meatus, there is seen invariably a longitudinal light reflex. The hearing power is only slightly affected, and in some cases is perfectly normal. The appearance under Siegel's speculum is most characteristic, as the affected part follows at once the condensation and rarefaction of the air in the external meatus, returning afterwards to its bulging position. On manipulation with the probe it feels like a miniature air cushion ; the movement of swallowing with closed nose leaves the convex position of this quadrant quite unaffected. In one of the cases Dr. Gompertz had tried the effect of multiple paracentesis, and for two days the position of the quadrant in question remained normal, but afterwards returned to its old position.

It was only by a consideration of the condition in the naso-pharynx that the writer came to associate the appearances with changes in the permeability of the Eustachian tube. The patients assert that even by the very gentlest act of blowing the nose they feel the impact of air against the drum membrane. There may therefore be perfect facility for the entrance of air into the tympanum, but some obstruction preventing its exit. In cases in which the naso-pharynx was examined there was found catarrhal conditions, hypertrophies of the mucous membrane, polypi, or suppurations in the accessory cavities. He was not quite certain as to whether in these cases certain swollen folds on the floor of the tube acted as valves, so as to allow of inlet but not of outlet of air, or whether, on the other hand, particles of mucus stuck in the narrow isthmus of the tube, so as to form a valve. He was, however, in a position to state that he had been able to remove this troublesome

abnormality partly by simple treatment of the naso-pharynx, partly by the association with it of the use of the catheter and bougie.

Dr. GOMPERTZ. *Experiments in regard to the Closure of Old Perforations.*

He had carried out Okuneff's method, and had treated a number of "obsolete" perforations of the membrane by cauterization of the margins by means of trichlor-acetic acid. The results were very satisfactory, and out of ten cases he had in four brought about cicatrization of the perforation after a few applications of the caustic, and in one of these the whole of the lower half of the drum was affected as far as the periphery. In the remaining six cases the perforations diminished very materially in size. The process was carried out under local anæsthesia, by means of a ten per cent. solution of cocaine, after which the cauterization was effected by means of the thin probe, round the point of which a few threads of cotton-wool were twisted and moistened in deliquesced trichlor-acetic acid. The treatment is painful, but is very well borne by the patients. Naturally, it ought only to be employed in those cases in which the previous application of an artificial drum has proved that the closure is not likely to make the hearing worse. The writer found the appearance of the drum, after the cicatrization, particularly interesting. At the seat of the perforation there was always formed a grey, firm, lustreless membrane, which passed over, without a distinct margin, into the rest of the membrane. This appearance proved that the *substantia propria* could undergo regeneration during cicatrization, as he had previously stated. He did not think that this action was peculiar to trichlor-acetic acid alone, but that there might be other caustics which would produce the same effect. Why six of the ten cases had not yet completely healed depended upon the fact that the duration of the treatment was still too short. In the cases in which healing took place the hearing improved considerably, and in one of them the subjective noises disappeared which had troubled the patient for two years.

Dr. HAMMERSCHLAG. *On Respiratory and Pulse Movements in the Membrana Tympani.*

The writer gave an account of the literature of the condition, referring specially to the important works of Politzer, Lucæ, Mach, and Kessel. He described his own investigations carried on by means of an apparatus of his own construction, which was similar to the one used by Mach. Out of thirty observations on four young persons with healthy ears, the following results were obtained :—

The membrane showed consistent movements, synchronous with the systole of the heart.

The drum membrane, in quiet respiration, moved outwards during inspiration ; inwards during expiration. In quiet breathing through the mouth, these respiratory movements were less distinct.

He comes to the following conclusions :—

The tympanic cavity lies, under normal circumstances, in free communication with the naso-pharynx.

The expiratory stream of air draws the air out of the tube and tym-

panic cavity, on the principle of the aëro-dynamic paradoxon, so that the drum membrane moves inwards.

The inspiratory stream presses in the tympanic cavity, and all the more easily because this is then the place of less resistance. Politzer's observations, differing somewhat from these, should stimulate to further and more extensive investigations, so that in the future the contradictions may be explained or set aside.

As regards the pulse movements, he remarked that similar observations had already been made by Politzer, Schwartz, Moos, Van Troeltsch, and others. The explanation of the pulse movements had already been sought for by other authors, and it depended upon this: that with each systole the lumen of the tympanic cavity was diminished, so that the membrane was forced outwards. He had no fresh explanation to offer, and considered this to be the correct one.

Prof. GRUBER then delivered a valedictory address.

Dundas Grant (Trans. and Abs.).

VIENNA SOCIETY OF LARYNGOLOGISTS.

Meeting, February 6th, 1896.

President—Prof. STÖRK. *Secretary*—Dr. KOSCHIER.

WEIL. *Pathology and Treatment of Suppurations of the Sinuses, and especially of the Maxillary Sinus.*

After the previous discussions, the author had projected a comparative study of the various methods of treatment of suppurations of the sinuses, but has found this to be impossible, since there exist few statistics, and these contain but little detail and consequently are not of value. Nearly all authors adopt radical surgical methods, and the conservative treatment of irrigation through the natural openings succeeds only with few, who generally consider it difficult and producing bad results. Young authors go further. For example, for empyema of the antrum of Highmore they say that an opening for the evacuation of pus may be made at any point; they do not make further allusion to a natural opening. It is the same in all branches of the specialty where conservative methods, even when they may succeed, are not adopted like new operative methods, which become immediately employed. The young specialist who for the first time has to choose a method of treatment of empyema of the antrum will rather have recourse to the perforator or chisel, which will certainly give issue to the pus, and when his patient is cured he will ask if it had not been possible to avoid intervention.

Weil then discussed the results of his own experience of the conservative treatment. He has altogether met with about 96 different empyemas in 52 patients, and 23 suppurations of the maxillary sinuses in 17 patients. Of this number 7 were simple cases without complication; 5 of them were regularly treated and cured in a lasting manner, by 7, 12,

17, 30, and 41 irrigations, lasting from one week to four months. The oldest cases, which had already lasted four or five years, have been controlled after several recurrences.

Weil was opposed to the idea of the dental origin of empyema of the antrum of Highmore, which for some years has had fewer supporters, since numerous anatomical pathological researches have demonstrated the frequency of affections of the mucous membrane of the sinus in the course of various acute infectious conditions, and we have come to know much about suppurations of the other sinuses which have nothing to do with teeth, and consequent upon epidemics of influenza. We have observed a large number of cases of empyema. The author then reviewed the results of the researches of Zuckerkandl and Demochowski on the spontaneity of acute inflammation of the mucosa of the sinuses, and quoted some original observations, and others gathered from literature, which agreed with these perfectly. During the course of this year he has become convinced that most suppurations of the sinuses tend to cure spontaneously if the regular evacuation of the pus is assured, and that in his most convincing observations the original infectious suppuration has been spontaneously cured. In these cases suppuration remains from a foreign body, which is maintained by the purulent caseous mass, and which ceases when this is evacuated by a natural or artificial channel (on condition, of course, that the destruction is not too deep), just as in the case of a child with nasal inflammation and *ozæna* following upon a prolonged retention of a foreign body, and who is cured in a few days after its extraction. It is only in this manner that we can explain the rapid cures obtained by a number of observers by different methods; and a striking example of this was the case presented by Weil at the meeting of January 9th, where a fetid caseous empyema of the antrum, having lasted nine months, was absolutely cured by seven irrigations with hot water, notwithstanding a caries of the second molar and of the first molar with a fistula, which ceased to suppurate after the cleansing and stopping of the tooth, not performed until some weeks after the cure of the empyema.

Meeting, March 5th, 1896.

President—Prof. STÖRK. *Secretary*—Dr. GROSSMANN.

PANZER contributed a section of *Laryngeal Fibroma* of extraordinary dimensions.

The patient, a florist, came to Chiari's clinic in July, 1890. He was fifty-two years of age, and had been hoarse for several months. The orifice of the larynx appeared perfectly obstructed by a tumour larger than a hazel nut, of plain surface with a few irregularities, very transparent, and mobilized by the air current. It probably arose from the right vocal cord. It was easily removed with the snare, when the upper surface of the right vocal cord was seen to present a wound extending over the

whole cord and having at its edges small mucous bundles. The tumour therefore arose from the cord and not from the ventricle. Histologically it was found to be covered everywhere with pavement epithelium. In places were seen cavities filled with homogeneous masses, colouring deeply with eosine, very probably serous exudation between the epithelium with hyaline degeneration (Prof. Kolisko). The tumour varied in appearance according to the sections. In some there was only fibrous tissue containing round cells; others enclosed bundles of tissue with serous infiltration; in others were the homogeneous masses colouring with eosine (hyaline). Fusiform cells, with large fibrous nuclei, were found, and small cavities due to the separation of tissue. The tumour was a fibroma with secondary modifications, serous transudation, softened cysts, hyaline degeneration. The degeneration is explained by the mobility of the tumour, flexions of its base, and troubles of nutrition.

WEIL continued the lecture which he had commenced at the last sitting on *Suppurations of the Sinuses, and of the Maxillary Sinus in particular*.

In order to determine the diagnosis of empyema of the antrum of Highmore, when exploratory puncture across the maxillary orifice has failed, the author practises puncture across the inferior meatus, according to Schmidt's method, a proceeding which he has found almost infallible in about thirty cases, simultaneously with the exploratory injection of Lermoyez. He finds the needles ordinarily used too large, those of 0.9 to 1 millimètre in thickness piercing the bone more easily. The point ought to be curved, because of the descending direction of the puncture, and in order to be certain in turning the needle that it is engaged in the cavity.

This is indispensable in exploratory puncture, for otherwise the liquid may be easily injected under the mucous membrane or into the cheek, which might lead to accidents, such as glandular suppurations. Severe antisepsis is *de rigueur*. When the result is positive, Weil follows the exploratory puncture by a pulverization, which ought to last until the water escapes by the nose, notably facilitating subsequent treatment across the maxillary orifice. When the empyema is assured, it is necessary to seek the maxillary orifice, and if it cannot be found immediately to partially resect the middle turbinated, removing only the edges which impede the movements of the canula in the middle meatus and prevent the finding of the maxillary orifice. The author has had recourse in about fifty cases to this small unimportant intervention.

Weil enumerated then the various objections made against this treatment, the principal of which is that the patients cannot treat themselves. However, the woman shown at the meeting of the 2nd May, 1895, had easily learnt it, and demonstrated it to the society on December 5th; and so did another patient, in whom the middle turbinated was preserved. Weil makes the canulas either fixed or movable. He had read last summer in Stoerk's volume that this author had for a long time employed irrigation made by the patients, but he had no knowledge of it before. He then explained how by careful observation—for instance, by the regular measuring of the suppurative discharge—we can draw conclusions

as to the chances of cure of the internal cavity, and deduce a probable prognosis ; and said that in order to be assured of the introduction of the canula he had had recourse to exploratory injections of substances easily recognized, such as chloride of silver and dermatol. He then discussed the various operative methods and advantages and disadvantages of conservative treatment, reviewing the most recent opinions (Ziem, Avellis, Moltenius, Jansen, Grünwald). The author has only once seen trephining through the canine fossa ; it was made in spite of him, and the affection recurred for months, with hæmorrhages sufficient to endanger life. He explains its employment only by reason of its requiring no technical skill or special instruments. He thinks it is also very regrettable in the interests of science that the results of unsuccessful treatments of these empyemas are so rarely published. The obstinacy of numerous empyemas of the antrum of Highmore proceeds but rarely from pronounced modifications of the mucous membrane and bones, but more often from the coincidence of other empyemas. He concludes that in most, perhaps in all, combined empyemas, the ethmoidal labyrinth is often the central point of the affection, and attacked primarily, but frequently, suppuration of the ethmoidal cells is avoided.

The author cited some cases, and will later on publish a complete monograph on ethmoidal suppurations. In these cases the results of treatment are naturally much worse ; the author has almost always obtained a marked amelioration, and it is only latterly, since he has directed his attention to ethmoidal suppurations, that he has observed many cures. As to the other sinuses the same remarks are applicable. Many suppurations of the frontal and sphenoidal sinuses can be imputed to empyema of Highmore's antrum. Weil concluded by remarking that the lesion of the osseous parts of the sinuses complicates and impedes the cure, and that the exposure of the natural openings and their irrigation approximates most to spontaneous cure, and constitutes the most rational treatment. It is only when at the end of several months there has been no result that it is necessary to adopt energetic methods, but the author is of opinion that the curette ought to be abolished from the therapeutics of the suppurations of the sinuses.

Meeting, 9th April, 1896.

President—Prof. STOERK. Secretary—Dr. HAJEK.

EBSTEIN showed a laryngeal specimen and histological preparations from a case of *Laryngeal Stenosis due to Leucæmic Infiltration*.

Fourteen days after a violent cold severe stenosis occurred, in the course of which there was found, especially for two days preceding the tracheotomy, a rapid increase of the infiltration. Laryngoscopically the appearance was that of a tubercular infiltration. The stenosis seemed to be especially due to an extensive infiltration of the subcordal mucous membrane, extending posteriorly to the sixth tracheal ring. Histologically

there was found an infiltration of mononuclear leucocytes in the ventricle, the vocal cord, and the mucous membrane of the subcordal space. The most affected point was the subepithelium around the glands and vessels. Coloured by Grabitschewsky's method, eosinophile cells were found in the infiltration. It was particularly interesting to find Charcot's crystals in the mucous membrane of the hypertrophied ducts of the glands.

PANZER showed a patient with *Empyema of the Antrum of Highmore*, which had caused an abscess and perforation of the palatine vault. The interesting point was that the sinus could be penetrated by an opening situated near the middle line.

DISCUSSION ON EMPYEMA OF THE ANTRUM OF HIGHMORE.

ROTH was happy to hear the opinion prevailing that the affection is much oftener of nasal than dental origin. As to spontaneous cure of the empyema, the clinician could more frequently pronounce it than the pathological anatomist, for he more frequently had occasion to observe it, and we could not deny that acute suppurations were also cured spontaneously in the same manner as suppurative catarrhs of the nasal mucosa. We meet with spontaneous cures of chronic suppurations now and then, but this is not generally the case with chronic empyemas, and experience teaches that this kind of suppuration often lasts many months, in spite of careful irrigations of the cavity, without always diagnosing a complication. It is easy to understand that, consequent upon persistent suppurations of the mucosa of the sinus, excoriations occur of certain spots, and vegetations, which prolong the duration of the suppuration. It is rare to observe polypi in this cavity. As to irrigations across the natural opening, it is intelligible that this method ought to be chosen whenever we can penetrate by this opening. Two objections, however, must be raised against this method; many causes (obstruction of the opening through swellings, granulations, or polypi, hindering penetration through this opening, or a malformation of the middle turbinated impeding the passage of the sound or canula. We must not forget, also, that some patients cannot submit to prolonged treatment by the physician, and it would be necessary to teach them to make injections for themselves, which is very difficult in most cases. The author's case is an exception to the rule. Besides, when we wish to penetrate through the natural opening, it is often necessary to have recourse to operations, such as removal of granulations, extraction of a portion of the middle turbinated. I believe, therefore, that it would be essential to practise without hesitation an operation so inoffensive as ablation of a portion of the turbinated, which would allow the patient to penetrate the sinus for its irrigation. I am not a supporter of those radical operations which, originating in Germany, have been propagated here; but opening through the alveolus or extraction of a portion of the turbinated are not radical interventions, and they allow the patient to irrigate for himself and the physician to tampon the cavity with medicated wool, to swab the mucous membrane, and hasten the cure.

RETHI: This discussion had enabled him to collect his observations on chronic suppurations of the maxillary sinus, and to divide them into two groups, to judge of the exact value of various operative methods;

those of the middle meatus, treated partly through the natural orifice, partly through an accessory opening, and partly by puncture through the external nasal wall; on the other hand, those which were opened through the inferior meatus or alveolus. These two proceedings have furnished nearly identical results, nearly forty per cent. of cures. The details will be published later on. He remarked that he did not count as cures, relief to the local sensibility or to the cephalalgia, or diminution of the suppuration, but only its complete cessation. From his own experiences he has adopted in principle, whenever possible, treatment of the maxillary sinus through the natural openings, which he has been able to sound in about half of his cases; but when the orifice was difficult to traverse, he had opened across the external wall of the middle turbinated. If the empyema had arisen from the presence of carious teeth he opened across the dental alveolus. He did not here refer to cases where there was caries of the walls of the cavity or proliferation of the internal mucous membrane, in which it was necessary to employ some other procedure, such as large opening through the canine fossa. He could not determine according to the cases which method had succeeded the best—we can only tell later on if any treatment has been efficacious; but we do not know under what circumstances we shall obtain a definite cure. If, after failure of treatment through the middle meatus, the patient agreed to try it, he had perforated through the alveolar apophysis, after removal of a tooth, even if it were sound; but the patient ought to be informed of the chances of this method, and to know that a cure, though possible, cannot be guaranteed. He generally refuses the operation. It may be said in favour of the alveolar method that subsequent treatment is more simple and may be conducted by the patient, but irrigations ought not to be prolonged indefinitely; if at the end of several weeks they have given no result they are useless. Many patients learn to irrigate the middle meatus across the large opening. Since he had reviewed his cases his previous ideas had scarcely been modified. He had retracted from radical treatment and had become conservative.

SCHEFF associated himself generally with the ideas of the previous speaker. As to the etiology, he adhered to the ideas which he had advanced in 1891, consequent upon his anatomico-clinical studies, that caries of the teeth and their roots (even admitted by those who oppose the dental origin) are almost always present, as has been remarked in the course of this discussion, and that their extraction may be recommended to allow of penetration into the sinus. He defended himself from having denied the origin of nasal empyema, since he had referred to it in the article quoted. But the appearance of empyema of the antrum cannot be considered as a proof of its purely nasal origin, because, being an infectious disease, influenza may excite trouble as well in the sinus as in the lungs, for it has already given origin to dental periostitis and pulpitis, not preceded with caries, when a tooth was intact externally (upper molar). As to Weil's therapeutics, he remarked that Alonelle in 1737, and Jourdain in 1765, has successfully employed irrigations through the natural openings, and that our contemporaries, Stoerk and Hartmann, have had recourse to the same method.

CHIARI said that of fifty-eight cases of empyema of the antrum of Highmore which he had observed for a long time, twenty-seven have been cured entirely and the others benefited. This is an argument in favour of his method, namely, perforation across the alveolus by a channel of three to four millimètres, irrigations, and tamponning by large bands of iodoform gauze changed once every week. Tamponning offers the advantage that the cavity is always filled with a mass slightly suppurating, so that secretion diminishes rapidly. If at the end of some months the pus has not dried up, the internal wall of the cavity is curetted, in order to remove vegetations and projections of the mucosa, which consist principally of hypertrophied and ectopic glands. This curettage is perfectly effected across the alveolar fistula. The treatment is continued until the sinus contains hardly any more mucus. The fistula is then closed by a pivot attached to a palatine prosthesis, the irrigations being continued until the total cessation of the secretion. The plug is then withdrawn and diminished to allow the fistula to gradually close. The duration of the treatment until cure has been in six cases from several weeks to four months, and in the others several months. Other cases have not been completely cured, which is also frequently the case with catarrhs of other mucous surfaces.

Chiari raised the following objections to irrigations across the maxillary orifice, to which he had frequently had recourse : the introduction of the canula through the maxillary orifice is not very easy, and requires a special technical skill ; irrigation through the canula is effected with difficulty, by reason of the narrowness of the orifice ; definitive cure is also very uncertain. It is also necessary for the patient to visit the surgeon very frequently, for the process is difficult to learn.

Chiari has cured by perforation and tamponning one case which had a long time resisted irrigations across the maxillary orifice. The employment of alveolar operations and tamponning ought to be recommended.

KOSCHIER : As the method of treatment recommended by Weil has been employed for many years by Stoerk, and also at his clinic, he proposed to relate his experiences. One often succeeded very readily in sounding the maxillary hiatus through the middle meatus ; sometimes it is necessary first to amputate the anterior end of the middle turbinated, and it is only very rarely that this operation is impracticable. Having carefully irrigated the sinus, as in Weil's method, he sprayed with astringent solutions. Nitrate of silver of various strengths, three to ten per cent., had given the best effects, and he now used it exclusively. It is only when sounding of the hiatus is impossible, or that the patient could not submit to prolonged treatment, that trephining the alveolus by means of a drill was resorted to. The results are not entirely satisfactory by either method. Cure rarely persists, and recurrences are frequent at the end of a few months.

HAJEK : Weil's communication comprises two points : the treatment and the etiology of affections of the maxillary sinus. Weil's method, treatment through the natural opening—cannot be generalized, for a too pronounced curvature of the middle turbinateds, or an excessive hypertrophy of the ethmoidal bulla, often hinder the introduction of the

instrument. In cases of chronic empyema, we have to remember that numerous vegetations around the hiatus often still further impede the entry of the canula. It is then only after partial resection of the middle turbinateds, and amputation of hypertrophies of the extremities, that the orifice of the maxillary sinus is disengaged, and then it is necessary to clear the operative field of pus.

Hajek pronounced himself against Weil in the contention that irrigations can be made as easily through the natural opening as by the opposite orifice, for observations speak against this hypothesis. The determination of cure is not as difficult as certain authors have said. When the cavity suppurates no longer Hajek closes the hole, and maintains it thus from four to six weeks. When, then, the sinus remains dry, we have a sign of certain cure. Hajek does not adopt the ideas of the preceding speaker as to etiology. The opinion, based on the researches of Dmowchowski, according to which, in the course of an acute suppuration, the mucosa returns to the normal, and the stagnant pus acts as a foreign body, is not verified by practice, for our cases always concern an ulterior period where the mucosa itself is inflamed, and suppurates constantly. Hajek has often observed spontaneous cures of acute empyemas; but he is opposed to Weil when the latter contends that suppurations consecutive to acute coryzas are empyemas, this opinion wanting a basis. Hajek is not also of opinion that most empyemas of the antrum rebellious to cure have their origin in complicated ethmoidal suppurations, which fails in proof. Without doubt this is often produced, but not in all incurable empyemas of the maxillary sinus. Hajek is certain that frequently, in spite of the absence of complications, affections of the antrum are not cured. We do not know to what to attribute this peculiarity.

Meeting, 7th May, 1896.

President—Prof. CHIARI. *Secretary*—Dr. SCHEFF.

CHIARI made remarks upon the communication made at the last sitting by Panzer on a *Suppuration of the Right Antrum of Highmore*, with penetration across the palatine arch near the middle line. He made a larger opening through the inferior meatus, for there already existed a small perforation, and sounding through the maxillary orifice could not be performed. Irrigations were made through this opening until the cure of the palatine abscess. As the patient was obliged to return to his village, a small opening into the antrum was made across the alveolus, through which irrigations were made, and the antrum then tamponned with bands of iodoform gauze. This was done with the object of facilitating irrigations by a country doctor not familiar with the specialty.

WEIL terminated the discussion on suppurations of the nasal sinuses of the nose. He expressed his astonishment at the remarks made as to the paternity of irrigations across the maxillary orifice; he had quoted all the publications relating to it *à propos* of his first case, which he had

related on the advice of Stoerk. He was happy to have met with marks of approbation; refutations of his ideas proceeded mostly from misconceptions. When Roth thinks that partial resection of the middle turbinated is often an important operation, he remarks that, on the contrary, the wall of this cavity remains intact, to which he attaches great importance, and that the wound is cicatrized in fourteen days, whilst the artificial opening ought to remain patent during the whole duration of the treatment. When Roth and Hajek raise anatomical objections to sounding, he would observe, on the contrary, that he has never met with them, in spite of the fact that he has had much difficulty in about twenty per cent. of his cases; and in the frontal sections of the nasal cavity described by Zuckerkandl, he has found nearly one-fifth of cases where it would have been impossible to sound after having attempted occlusion. He does not find any contra-indication of the operation made in a region infested with pus: it is often done for polypi, ethmoidal suppurations, etc.; and when Hajek operates by Cooper's method, he also always makes a passage across the healthy bones into the cavity often filled with pus. He would not enter into discussion of Scheff's question as to the causes of empyema of the antrum, for he had approached this subject only from a theoretical point of view, and he would be glad if his colleagues would accept that only for cases of nasal origin, which, in his opinion, constitute ninety-nine per cent. of the whole.

As to the possibility of complete methodical irrigation across the maxillary orifice, he could only rest on his own experience; but he would propose the following means of control: he would irrigate through the maxillary orifice in cases operated upon by Cooper's method, then withdraw the tampon from the alveolar fistula, and irrigate by this channel. According to Hajek, we can easily determine perfect cure; but how can we control an ulterior occurrence after closure of the artificial opening? He could from time to time control his cases, and eventually recommence treatment. His etiological views are not, as Hajek believes, based upon the experiments of Dmowchowski, but on his own clinical observations. He had already partially announced them at the meeting of the 2nd May, 1895, when he had announced his communication for the autumn, whilst Dmowchowski's work had only appeared at the end of October; however, he is rejoiced to find that this author agrees exactly with the ideas which he had arrived at when five years ago he had cured five patients by irrigation, which decided him to treat all empyemas of important sinuses by this method. The success of this proceeding is proved by the cure of the patient shown after seven irrigations, a case which must cause his opponents to reflect. An explanation of this fact must be found. Here at the end of nine months, equally as well as in the observations recorded one or two weeks after operation, there has been no recurrence. He has not reckoned amongst empyemas all the suppurations consecutive to acute coryzas, but he has attached a special importance to the abundance of matutinal secretion (after rising), the frequent unilateral character of the suppuration, and the coincident symptoms (swellings of the cheeks, pains in the healthy upper jaw, etc.). When we completely consider the anamnesis, we meet with numerous analogous cases.

As to his clinical remarks *à propos* of complicated ethmoidal suppurations, he has said that he will embody his opinions in a memoir upon ethmoidal suppurations. He had now spoken in the hope that his colleagues might try the treatment of obstinate empyemas of the antrum. The operative method of Chiari is the one which he preferred, for it well avoids those accidents formerly recorded. He would not like an error made as to the tendency of his experiences. Naturally he had no intention of pronouncing against operations, but he desired to raise his voice against the abuse, growing more and more, of operations more or less extensive in all cases, and against the rejection of simple sounding of the orifice. This means should be first tried in all cases, and, as Killian remarks, we shall derive results increasingly satisfactory from its practice.

HAEK. *The Pathological Modifications of the Ethmoidal Cells in Inflammations of the Nasal Mucosa (Necrosing Ethmoiditis).*

Woakes, in 1885, for the first time approached this subject. He spoke of a particular affection of the middle turbinated, commencing in hypertrophy, and producing, as a consequence, a necrosis of the osseous lamellæ. We see nasal polypi develop which may often give rise to abscess of the maxillary sinus.

Although in the same year Woakes completed his memoir and added microscopic plates to facilitate its comprehension, his work has been much attacked, and few authors have adopted his ideas. The words which end Woakes' work are very important as to the question of nasal polypi, for they say that these polypi are not primary affections, but a sign of necrosing ethmoiditis having commenced in alterations of the mucosa. Unfortunately Woakes' article was so ill-expressed and his figures so confused that his researches have been either passed in silence or judged very severely. Simon has placed a point of interrogation before his hypotheses, and M. Schmidt observed that he saw in the communication of the English author a series of diverse affections united under the name of one affection. Zuckerkandl has refuted, in a logical fashion, Woakes' results, saying that he had never met with osseous necrosis in any case of nasal polypus, but that on the contrary, the osseous parts situated at the base of numerous polypi were lengthened and softened. In spite of these contradictions Woakes did not cease to seek for new proofs of his views. In 1889 he published new researches, the interest of which consisted especially in the fact that the anatomical portion of them was conducted by Martin.

These investigations showed that in twenty specimens there were met with two cases of osseous necrosis, ten times partial absorption, and in eight cases the bones were intact. After this Woakes anew promulgated his necrosing ethmoiditis, although it was clear that Martin's researches did not prove the existence of a necrosing ethmoiditis.

In recent works Woakes' theory has not recruited any more followers, although Grunwald is said to have met on many occasions with necrosis in the living subject. The Annual Meeting of British Laryngologists in 1895 demonstrated the diversity of ideas on this point. Most speakers pronounced themselves against the opinions of Woakes, and

denied the existence of necrosis and its participation in the formation of nasal polypi. Whilst up to now the discussion had borne on the question of absence or existence of necrosis in nasal polypi, Zuckerkandl has opened a new horizon by the statement that the osseous layer situated under the polypi and the hypertrophies is itself hypertrophied—that is to say, that its condition is just the contrary from what Woakes contends. The author has made researches upon the living subject, which has the advantage of presenting at the same time the clinical picture. He has examined seventeen cases of hypertrophied degenerated turbinateds, and twelve cases of polypi with their osseous apophyses. The latter is obtained by evulsion. The hypertrophies and the polypi presented in some cases the appearance of profuse rhinitis, in others they were accompanied by empyemas of secondary importance. To the touch of the probe certain hypertrophies revealed a slight friability of the subjacent osseous layer.

In order to understand the anatomical conditions we ought first to undertake a preliminary research upon the normal mucosa and the bones which are connected with it, of which the principal points are here reproduced. If we examine an entire middle turbinated in order to study the relation of the mucosa and the bones, we shall be struck by the spongy character of the osseous portion. There exist large and small spongy spaces, and there is always a large cavity of the middle turbinated. It is very important that the large and small spaces should be open largely in diverse spots from the surface, in such a manner that the medullary spaces, often repeated, form a solution of continuity with the mucous investment. Most of the medullary spaces contain a little fat, and consist especially of cicatricial areolar tissue and medullary cells; others contain more fat, whilst some contain both. The importance is that there does not exist any contact between the deep layer of the mucous membrane and the medullary tissue, so that an inflammation of the mucosa cannot penetrate into the medullary space. The other parts of the ethmoidal bones offer the same spongy character.

Microscopic sections of the middle turbinated, of the ethmoidal labyrinth, and of the uncinatè process were presented, in which are distinguished the relation between the mucous investment and the medullary spaces. In the normal condition it is easy to understand pathological modifications. We can, according to their intensity, divide into three categories the changes observed in excised inflamed turbinateds. The first class comprises infiltrations of the surface of the mucosa, when the deep layers are intact. The second class can be designated deep inflammation, because it is characterized by an infiltration, not only of the whole thickness of the mucosa, but also of all the medullary spaces which are connected. Sections are shown.

In these cases of deep inflammation the whole turbinated is infiltrated, and in the middle of the inflamed tissue the osseous trabeculae remain intact. It is easy to understand that when the periosteum and the medullary spaces are infiltrated, the bones cannot remain indefinitely normal. In most cases of prolonged inflammation, there are produced osseous modifications of two kinds—hyperplasias and rarefactions; these

latter may be considered as the third class of modifications. It will be recognized in all the sections that the osseous changes are only the result of inflammation penetrating from the surface into the depths, and never is there seen any osseous modification without participation of the soft parts.

Of seventeen cases of hypertrophy of the middle turbinated examined, six presented only a superficial inflammation of the mucosa, eleven a deep inflammation, extending also to the medullary bone: three cases presented an osseous hyperplastic tumour, and in four cases rarefaction was clearly seen—that is to say, the lacunæ of Howship and osteoclasts. In the latter cases the osseous trabeculæ were thinned out, and the medullary spaces enlarged. We remark that in most cases of osseous modifications there is never hyperplasia or rarefying osteitis, but both at the same time, a fact which has been long since known by anatomists. The details of microscopic examination will be furnished by sections and drawings.

Hyperplasia is due to the excitation and proliferation of periostitis allied to congestion of the mucosa, whilst rarefying osteitis proceeds probably from nutritive trouble of the bones arising from accidents of circulation. The latter are explained easily by the cellular infiltration of the medullary spaces and partial compression of the veins. It follows from these researches that rarefying osteitis does not play a preponderant *role*, but is accessory in the course of inflammations penetrating from the surface downwards. Woakes has therefore committed a great *lapsus lingue*, when he places necrosis, or, rather, rarefying osteitis, in the first rank of manifestations indicating the presence of polypi. What has been said as to hypertrophies applies equally to polypi; it follows that the latter are only an œdematous hypertrophy. Of the twelve cases examined, four presented superficial modifications of the mucosa, and eight a deep inflammation, *i.e.*, an infiltration of the subjacent osseous layer; in two of these latter hyperplasia was found, and in three cases an important rarefying osteitis. Here, also, rarefaction of the bones is only accessory, and has no characteristic value for polypi, for the latter, before everything, originate in inflammation of the peripheral mucous layers. There does not exist any example proving the dictum of Woakes, who affirms the contrary, *i.e.*, the origination of polypi from the medullary spaces.

At the close of his communication on necrosing ethmoiditis, Hajek made some remarks upon the appearances of œdematous medullary tissue in amputations of the middle turbinated. This tissue may easily be confounded with a polypus, and differs only in the absence of a solid envelope (mucosa and epithelium).

The presence of this particular tissue explains how this tissue, meeting with slight resistance (the open spongy space of the middle turbinated), is inflamed, and easily becomes œdematous.

In certain circumstances cannot a polypus be attributed to primary inflammation of the medullary spaces? This idea ought not to be dismissed *à priori*, but we must observe that there exists no proof of this opinion. It might be possible, also, that obstinate recurrences of inveterate polypi might be explained, at least partly, by the infiltration of

the spongy characters. Perhaps the base of the polypus is formed of osseous trabeculae separated by infiltrated medullary spaces offering little resistance, and disposed to become inflamed from their facility of excitation. This latter idea, however, can only be considered to be hypothetical. As to the relations of rarefying osteitis with necrosis and caries, there is never any formation of a sequestrum, for the osseous tissue is absorbed and lost in the medullary space ; this is not a caries, for the absorption of osseous portions never provokes ulceration or destruction. We may compare the osseous rarefactions with the absorption of the turbinated bones in atrophic rhinitis ; it is never followed by the formation of any sequestrum, or with ulcerative destruction. The author will publish a detailed memoir in Fraenkel's "*Archives für Laryngologie.*"

DISCUSSION.

WEIL asked if in his sections Hajek had not found places where the mucous membrane left the bones exposed, and where one would not have been able to feel it with the probe ?

As to Hajek's hypothesis as to the recurrence of nasal polypi, Weil believes the clinical explanation to be very easy. On extracting a polypus and removing an osseous fragment we very often find the other side (the middle turbinated or the internal surface of an ethmoidal cell) occupied by small polypi ; it is, therefore, the remaining mucous membrane of the meatus, and of the ethmoidal cells, which furnish new polypi. Operators who extract the polypi with the cold snare and timidly preserve the bones have frequent recurrences. Weil is glad that Hajek has often found the bones affected, for he has always believed in the existence of a rarefying osteitis in cases where the bones were friable and were easily removed with the polypus. It is difficult to determine if the osteitis is primary or secondary ; and at the meeting of naturalists in Vienna in 1894, the author admitted the opinion that those questions would be solved by the histological examination of osseous parts extirpated on the living subject.

PANZER, in opposition to Hajek, said that polypi might arise from other causes than sanguineous deposits and consecutive œdema, because on histological examination many polypi exhibit not only an œdema, but other important modifications : hypertrophy of the mucous glands, etc. As to the appearance of œdematous masses at the point of rupture of the anterior extremity of the middle turbinated, which Hajek considers to be an œdema of the medullary bone consecutive to excision, Panzer remarked that we often meet with small polypi consequent upon the extraction of osseous parts of the anterior extremity, and that they proceed from a cavity of the middle turbinated, which is opened at the same time as the bones in removing the anterior extremity.

ROTH : Panzer has badly misunderstood the author, for the latter has clearly explained that the polypoid vegetations appearing a little time after the amputation of the anterior extremity of the middle turbinated are not polypi covered with mucous membrane and epithelium, since they disappear when they are enclosed in the snare ; they are rather an œdematous medullary substance. The tumours existing in the turbinated

are often polypi, as Panzer had observed in the course of an old nasal suppuration after amputation of the anterior extremity of the middle turbinated with the snare, and which case he had published *in extenso*. Moreover, we know that we frequently meet with true polypi in the ethmoidal cells, and that a bulla of the turbinated is nothing more than an ethmoidal cell, which makes the existence of polypi nothing surprising.

CHIARI said that osseous wounds are always covered with granulations, which is often seen after removal of spines of the septum. Contrary to Weil, he would advise, in evulsion of the polypus, not to attack so resolutely the ethmoidal bones, because the old surgical method, consisting in removing the turbinateds with forceps, did not preserve from recurrences. We should not fear to remove some osseous fragments at the base of the polypus, and to open the ethmoidal cells when they give origin to polypi. The principle is always to extract polypi even when small, and to remove all hypertrophies which might produce polypi. Chiari is of the same opinion as Hajek, that polypi and hypertrophies proceed from a chronic inflammation, in which the bones may participate, as Hajek has shown. Chiari observed that in the large naso-pharyngeal polypi it is not rare to meet with osseous lamellæ, having no relation with the bones at the point of implantation (for example, the middle turbinated); moreover, there almost always exists chronic inflammation of the soft parts of the bones of the neighbouring parts; so that participation of the ethmoidal cells in inflammation of the soft parts surrounding the polypus need not surprise us.

HAJEK: The œdematous tissue proceeding from the medullary spaces has nothing to do with polypi of the degenerated turbinateds, or of the ethmoidal labyrinth; the latter are true polypi, while the former have no envelope. He has never believed that polypi result from an œdema, but that they are an œdematous hypertrophy, an opinion generally adopted by rhinologists of the present day. He must answer negatively as to the existence of cases where the bones were naked and mucous ulcerations discovered, for in cases not complicated with syphilis or tuberculosis the author has never found ulcerative destruction or denuded bone, which would not alter the possibility of the opening of an empyema being able to give rise to partial necrosis of the mucous membrane and bones. The author's present work has been particularly concerned with typical modifications, and not accidental complications.

Meeting, June 11th, 1896.

President—Prof. STOERK. *Secretary*—Dr. GROSSMANN.

CHIARI exhibited a man, fifty-two years of age, who since February, 1895, had had hoarseness and pains in the left shoulder and half of the head. These symptoms were then attributed to an aneurism of the arch of the aorta, and a total paralysis of the left side of the larynx with

cadaverlic position of the vocal cords was observed. Since about six weeks the left ventricle has commenced to move posteriorly during phonation, whilst the concave true vocal cord and the arytenoid cartilage remain completely immovable. This peculiarity is still observed. Similar facts have already been observed in cases of recurrent paralysis; but this case is interesting, because since the onset of recurrent paralysis the left half of the larynx has been entirely immovable, and it is only much later that the ventricle has recovered its motility. Perhaps there was here a participation of the recurrence in the atrophy depending upon the aneurism. The patient will continue under observation.

STOERK gave a historical retrospect of the development of œsophagoscropy, accompanied with demonstrations of various instruments which he has employed. He gave a long description of an œsophagoscope with an articulated handle recently perfected by him. The instrument is introduced, curved like a bougie. He demonstrated its use on two patients.

EBSTEIN showed an instrument which he employs for endoscopic dilatation of caustic strictures of the œsophagus which resist the treatment of bougies or catgut introduced through the mouth. The dilatation is effected by tents of laminaria, introduced into the œsophageal tube by the aid of a simple instrument under the control of the eye. This instrument consists of a narrow sound 13 *chavrière*; 15 centimetres long, to the extremity of which is adapted a conductor furnished with two branches of small forceps. These latter are dentated on the edges. The other extremity is furnished with a screw controlling the movement of the branches, and curved to an obtuse angle so as to be better manipulated. It might be attached to a handle, which would not affect its weight. In the tubular forceps are inserted long and thick tents of laminaria and a solid thread of silk, which is fixed by a knot. With a little practice the introduction is easy. The instrument and the tube are then withdrawn, leaving the laminaria tent in the stend partose until it is necessary to remove it through the mouth by the aid of the silk thread. The application can be made for a more or less long time, without having to fear the effects of dilatation provoked by Senator's method. This method is especially suited to narrow strictures otherwise impermeable. It is less suitable for cancerous strictures. It succeeds perfectly in annular and short tubular strictures, and it can also be employed in disseminated stenoses, in order to dilate the uppermost parts, and practise introduction of bougies into the deeper parts.

EBSTEIN showed a child of seven years of age, in whom in four sittings he had succeeded in dilating the orifice of the annular retracted parts, which would not allow catgut to pass, with the result that he had abandoned a projected gastrostomy.

CHIARI showed a large soft tumour, six centimètres long, four centimètres broad, and five centimètres thick, which rose from the aryepiglottic fold and descended to the second tracheal ring. On the patient it changed form. By reason of its dimension and the numerous vessels that it enclosed, Chiari extirpated it by laryngo-fissure.

R. Norris Wolfenden.

MEETING OF SOUTH GERMAN LARYNGOLOGISTS IN HEIDELBERG.

(From the "Münchener Med. Wochenschrift.")

Dr. ALFRED KIRSTEIN (Berlin). *Autoscopy of the Air Passages.*
(See Abstracts.)

Dr. AVELLIS (Frankfurt). *Acute Empyema of the Antrum of Highmore, and its Spontaneous Cure.*

Having pointed out that acute empyema is much more common than is generally supposed, and having indicated why so many cases are not recognized, the author cited some of his own cases. Zarniko's statement that the symptoms of acute empyema correspond to those of the chronic cases, is not at all correct. Edema of the cheek and eyelids, or of the cheek alone, is an important symptom. From his own experience, and from the cases reported elsewhere, Avellis draws the following conclusions :—

1. Acute empyema of the antrum is very common.
2. There are severe and slight cases. Of the latter several have been reported in England; of severe cases I could find no reports, although, doubtless, many must have been observed.
3. The characteristic symptoms of the slight cases are: painful sensations of pressure and tension in the upper jaw; purulent, sometimes hæmorrhagic, discharge, of an irregular atypical character; the pain is increased by pressure, by coughing, or by straining; the secretion does not cease entirely during the night; soft œdematous swellings of the cheeks and eyelids frequently occur; the œdematous part is at times bright red; supra-orbital pain is rare, and bad smell is frequently entirely wanting.
4. The severe have all the symptoms of the slight cases, with, in addition, pretty high fever, apathy, photophobia, so great prostration and illness that patient stays entirely in bed, very profuse secretion, nausea, vomiting, mental faculties dull. I have seen such severe cases arise both from influenza, and also spontaneously.
5. Acute empyema readily returns. An ordinary cold in the head is enough to set up a fresh attack.
6. Bilateral empyema was as common (in my experience) as unilateral.
7. I only once saw an acute case pass into the chronic stage.
8. Acute empyema can give rise to polypi.

My opinion with regard to the spontaneous cure of acute antral empyema may be formulated thus :—

Slight cases almost all heal spontaneously; but recurrence is common. This may take place weeks or years later.

(The presence of empyema, and also of the cure, was established in all my cases—myself excepted—by washing out the antrum from the inferior meatus.)

Recovery is gradual. The first sign of improvement is that the pain

comes on later each day, and gradually diminishes, and the discharge gets less in quantity and less purulent in character till it finally ceases.

In those cases that require treatment, the antrum is to be syringed out; and it seems to me a matter of indifference whether this is done through the inferior meatus, through the natural ostium, through the alveolus, or through the canine fossa. The rapidity or slowness of cure depends, not on the method of irrigation, but on the nature of the infection. This, again, doubtless depends on the kind of bacteria present; but on this point we as yet know nothing definite.

I hope that my paper may have the effect of putting a stop (1) to foolish and misleading reports of the rapid cure of empyemata by this or that method of treatment; (2) to the mixing together of the symptomatology and prognosis of acute empyema with those of the very widely different chronic condition.

G. KILLIAN (Freiburg). *Exploratory Puncture of the Nasal Accessory Cavities.*

The only reliable method of diagnosing empyema of an accessory cavity is by syringing or blowing out the cavity. The latter is useful where pus or mucus is present in small quantities, or where the fluid is serous, because in these cases the fluid from the cavity is lost in the fluid from the syringe. The antrum of Highmore can be punctured with a pointed Hartmann's canula in the middle region of the middle meatus. Under cocaine the patient is not aware that anything special has been done, and the danger of wounding the orbit is very small. During three years, during which I and my assistants have made use of this method, we have never wounded the orbit.

The sphenoid sinus can often be sounded, and its natural opening entered by a canula. When this is not the case, its anterior wall can easily be pierced, even with a blunt instrument, as Schäffer has shown. Further, it is not always impossible to enter through the inferior wall with a right-angled instrument.

The ethmoid cells are more difficult to deal with. They all lie along the olfactory slit and can be entered from it, there being only a very thin bony wall to penetrate. In doing this one must keep above an imaginary line drawn from the top of the choana to the anterior end of the root of the middle turbinated. The instrument to use is a canula with its point bent at a right angle, the bent portion being just long enough to penetrate the thin median wall of the cells. With this instrument there is no fear of wounding the orbit.

If the space between septum and middle turbinated is too narrow, one must get at these cells from the middle meatus. When the middle meatus is fairly wide one can reach anterior, middle, or posterior cells with a canula bent upwards at the point at a right angle. If one keeps to the bend of the middle turbinated, avoiding its lateral point of origin, and works straight up, it is impossible to wound the orbit; but to avoid the danger of wounding the cavum cranii the bent portion of the instrument must not be more than half to one centimètre long. By the one route or the other every cell can be reached.

Only in a small proportion of cases can one sound the frontal sinus without a preliminary operation. Schäffer's method of entering through the floor, from between the middle turbinated and the septum is too dangerous. In most cases the anterior end of the middle turbinated must first be removed—a simple and generally permissible operation—and thus the road cleared for a blunt canula.

KLEMPERER (Strasburg). *On the Bacteriology of the Nose.*

StClair Thomson and Hewlett have shown that in about eighty cases the cavity of the nose is germ-free, and that only the vestibule contains numerous bacteria. Klemperer does not agree with them, but maintains that in healthy noses, while it is true that bacteria are to be found in quantity only in the vestibule, still no part of the nose is germ-free. Let the anterior parts of the nose be thoroughly sterilized with perchloride of mercury and washed out with sterilized water, then wipe out the parts higher and deeper in with sterilized cotton-wool swabs. These (the swabs) always bring away a few germs, from which two, three, four, or more frequently six, eight, ten colonies can be cultivated.

Klemperer cannot confirm the statements of Wurtz and Lermoyez as to the bactericidal properties of nasal mucus. Unlike these authors, he experimented not with anthrax bacillus, but with the bacteria which he had previously cultivated from the nose whose mucus he was testing. At first they did not grow well, and even diminished to some extent in number, but soon grew accustomed to the mucus and multiplied in it.

Extinction was never observed.

JURASZ (Heidelberg) presented a patient with a simple *Tracheal Polypus*.

HEDDERICH. *Clinical Experiences with Paramonochlor-Phenol in Laryngeal Phthisis.*

A year ago Dr. Spengler of St. Petersburg warmly recommended this drug. He experimented with it on pure cultures of tubercle bacillus, testing these afterwards on guinea-pigs; further he applied it to twenty-six patients, and reported ten cures.

We have treated thirty patients with paramonochlor-phenol in Professor Jurasz's clinic, and can report fair results. All the patients admitted that their condition had improved, usually after the first two applications. The dysphagia and irritability of the throat specially disappeared, and breathing became freer; ulcers became clean, and slowly healed; œdema and infiltration gradually grew less. In serious progressive cases no improvement took place. Two cases seemed to be cured, but as we have not seen them lately we cannot speak of them with any certainty. In three cases the treatment had to be given up, because nausea and vomiting came on regularly after each application of the drug. Along with this treatment general treatment was used, but purposely all operations were avoided.

Paramonochlor-phenol is phenol in which one H is replaced by one Cl; it is little soluble in water, but freely in glycerine. We used a ten per cent. solution in glycerine for the larynx, a twenty per cent. for the

nose and pharynx; the latter causes a white slough, like acid. carbol. liquefact.

While the results are by no means brilliant, they justify further investigation and trial of the drug.

LUBLINSKI (Berlin) had tried chlor-phenol, but had given it up again; its advantages were outweighed by its disadvantages.

SEIFERT (Würzburg) had given it up as far as the larynx was concerned, but still advised its use in tuberculosis or lupus of the nose.

PROEBSTING (Wiesbaden). *On Operations for Malignant Tumours of the Naso-pharynx.*

After some introductory remarks the author reported a case of naso-pharyngeal fibro-sarcoma in a peasant of nineteen, which he and Herr Sanitätsrath Cramer had had under their care.

The patient had suffered during the winter from repeated, violent epistaxis, and in March consulted Dr. Scheben. He removed several polypi from the nose, but, owing to the violent hæmorrhage this operation set up, had to send the patient to hospital. The author then saw patient, found the left naris blocked, and left side of naso-pharynx greatly narrowed by a tumour. From this he removed with galvanic snare a piece as large as a walnut, which proved to be fibro-sarcomatous. Cramer was called in. He first performed tracheotomy, and introduced a modified Trendelenburg's canula. Then he split the soft palate and the mucous membrane and periosteum of the hard palate, in the middle line, and with a chisel cut off the posterior portion of the hard palate. A free view was thus obtained of the naso-pharynx, and of the nose as far forward as the middle of the inferior turbinated. It then appeared that the tumour could not be removed from below, because it adhered firmly to the upper lateral wall of the nose. Temporary resection of the nose was therefore performed, after firmly packing the naso-pharynx and posterior half of the nose. The skin incision extended from the angle of the right eye, across the root of the nose, down the naso-labial fold, and straight back across the upper lip. Then the nasal bone and the proc. nasal. of the superior maxilla were chiselled through, and the nose turned over to the right. The tumour (about the size of an apple, and having many polypus-like processes) was then seized both from in front and from behind and below, loosened from its base, and shelled out with a large Lorentz's spoon. With this the bleeding, which had been considerable, ceased. The nose was firmly packed with iodoform gauze, and the external wound and that in the soft palate exactly stitched. The tracheal canula was left in till the evening. The result was in every respect satisfactory. As yet no recurrence; but the operation was done only two months ago.

Discussing the question of recurrence, the author narrated a case observed by Cramer and himself. Cramer had removed a naso-pharyngeal sarcoma from a forty-eight-years-old woman. A few months later this recurred, and grew so rapidly (completely blocking the nose, and both Eustachian tubes, with resulting deafness, and driving forward the left bulbus) that death seemed certain, and was daily expected. Without any apparent reason spontaneous shrinking of the tumour set in, the eye

returned to its normal position, hearing was restored, and the nose cleared, and the woman is now alive and well (*i.e.*, six years later). The diagnosis of sarcoma had been confirmed by the best microscopists. This tumour must not be confounded with the naso-pharyngeal fibroma of young people, which is probably commoner than is generally supposed.

ROSENFELD (Stuttgart). *Demonstration of a Laryngeal Carcinoma.*

The patient was a woman eighty-one years old, but very healthy and strong. Up till March, 1895, she had always been healthy. At that date commenced to suffer from hoarseness and cough, to which a few weeks later was added dysphagia: still later, shortness of breath and stabbing pain in the right ear. I first saw her on 12th September, and diagnosed carcinoma of the larynx, which, originating in the thyroid cartilage, had already spread through the corda vocalis to the arytenoid cartilage. Nothing abnormal to be found external to the larynx. Operation, even tracheotomy, refused. On 14th October tracheotomy permitted and performed. Up till then only fluids had caused pain in swallowing, but thereafter nothing but fluids could be swallowed: by January 14th even they could no longer be taken. Still, life was prolonged (on water and nutrient enemata) till February 15th.

DREYFUSS (Strasbourg) demonstrated a specimen of *Flat-Celled Epithelioma Laryngis*, which, apparently originating in the right sinus pyriformis, had perforated the lateral laryngeal wall, and appeared as a granulating tumour above the right false cord. Partial resection. Death four days later from pneumonia. Several cancerous glands as large as cherry stones, which had not been noticed at the operation, were found *post-mortem* deep in the neck.

KIRSTEIN (Berlin) showed an instrument for *Removing the Pharyngeal Tonsil*.

KILLIAN (Freiburg) showed a *Rheostat for Galvano-Cautery*, worked by foot, and enabling the operator to turn the current off or on, and to increase or diminish it, while actually using the cautery or cautery-square.

It is made by Ellis in Freiburg.

Arthur J. Hutchison (Trans. and Abs.).

BERLIN LARYNGOLOGICAL SOCIETY.

Meeting, January 17th, 1896. (Reported by Dr. MEYER.)

(Continued from page 225.)

GLUCK presented:—(1) Patient, aged thirty-six, whose larynx had been partially removed for carcinoma. (2) Patient, aged fifty-six, whose larynx had been entirely removed. Gluck recommends the procedure he adopted in this case—*viz.*, to stitch the trachea to the skin after it has been divided transversely; in this way the aspiration of secretion from

the wound is avoided. Healing takes place without any disturbance. Introduction of an artificial larynx (Wolff). In three or four weeks the trachea is replaced.

B. FRÄNKEL considered that this method was not always practicable. He mentioned a case in which there was no room between the cricoid and sternum owing to kyphosis.

KIRSTEIN demonstrated:—(1) A new instrument for operating on adenoid vegetations. (2) A forehead mirror with new form of attachment. (3) A contrivance (diaphragm) to prevent dimming of the eye-glasses during examination, especially autoscopy. (4) Man, aged twenty-five, with separation of the plates of the thyroid in consequence of thyrotomy which had been performed twenty-three years previously. By pressing the plates together the voice was improved. (5) The patient on whom the first operation was performed by aid of autoscopy.

B. FRÄNKEL had two cases of this kind which had been cured—one was operated upon by Bramann, the other by Israel. In other two cases a good result was not obtained owing to the size of the defect and the brittleness of the cartilage.

E. MEYER remarked, in regard to the first patient operated upon by aid of the autoscope, that the improvement in the voice was not due to the removal of the small nodule, but to the passing off of the recurrent paralysis previously present.

FLATAU found Kirstein's instrument for operating on adenoid vegetations less suitable than Gottstein's, which is narrower, and, therefore, better adapted for obtaining the specimen and for palpation of the nasopharynx.

B. FRÄNKEL feared that Kirstein's instrument would injure the soft palate.

HERZFELD demonstrated a patient with a tumour at the point of the tongue.

Meeting, February 28th, 1896.

SCHADEWALDT showed a patient in whom one vocal cord appeared red and thickened in its entire length. As the lungs were free, and there were no bacilli in the sputum, and, lastly, on account of the laryngoscopic appearance, he did not consider it tubercular; and yet there was nothing pointing to syphilis. The patient had coughed up fibrinous masses for a long time.

B. FRÄNKEL asked if they might not have to deal with influenza here, although the long duration of the affection disfavoured this view. He recommended iodide of potassium and tuberculin as aids in forming a differential diagnosis between syphilis and tuberculosis.

HEYMANN showed photographs taken by Einthoven, of Leyden, of the throat of a patient in whom half of the superior maxilla had been resected. The views represented the parts:—(1) At rest; (2) while "a" was being said; (3) during sucking; (4) during swallowing.

FLATAU remarked that photographs may also be taken when the nose is somewhat wide.

HERZFELD related that the tumour at the point of the tongue (case shown at a former meeting) proved on microscopic examination to be a papilloma. In addition, he showed a patient, aged forty-three, with two tumours as large as peas at the point of the tongue close to the middle line. The patient attributed the origin of these papillomas to his having torn warts from his fingers with his teeth when eight years old.

A. ROSENBERG. *Treatment of Goitre by Injections of Iodoform.* In a number of cases Rosenberg has injected twice or thrice weekly one-half to one cubic centimetre of iodoform solution (iodoform 1·0; ether and olive oil $\bar{a}\bar{a}$ 7·5) into the struma, and on the whole has obtained very good results. The patients were of all ages. The goitre was nearly always parenchymatous, and in some cases had caused stenosis of the trachea. In some instances the stenosis disappeared after a few injections. In all the cases the struma diminished. The number of injections and the time required varied greatly. After the injections the patients complained of pain—which usually passed off quickly—of a bad taste, and cough. No severe disturbances or dangerous symptoms were observed, so that Rosenberg recommends the method warmly.

HERZFELD referred to eight cases treated with iodoform. In six the goitre diminished four to five centimetres, and the patient experienced a marked improvement. After a few injections he recommends an interval.

FLATAU injects only when surgical treatment is inadmissible; his material, consequently, is small. The iodoform injection acts by the large quantity of iodine. He has seen good results obtained by rubbing iodine, in an easily absorbed form (iodine vasogene), into the skin.

HERZFELD attributed the results of the inunction of iodo-vasogene to the massage.

DEMME showed a patient who had suffered for fourteen days from difficulty in swallowing, which had gradually increased. A tense swelling is seen below the ear, extending to where the hair begins, and beneath it a second. The skin is stretched and not movable. The speech is thick. The left side of the palate is occupied by a tumour as large as a fist, which reaches to the middle line and passes to the posterior wall of the pharynx. The uvula is pushed to the other side. The growth rests on the base of the tongue and extends to the pyriform sinus, so that the epiglottis is pressed to the right and backwards. The larynx also is pushed to the right. The growth reaches upwards to the Eustachian tube. It is tense and elastic, as externally. On making a bi-manual examination, the connection of the outer and inner swellings becomes evident. A small incision led to a very profuse hæmorrhage (1·5 litres), which ceased only after compression for five hours. The growth was a very large hæmatoma.

Meeting, 17th April, 1896.

KUTTNER reported two cases in which, after the use of Noortwyk's drops—a secret remedy for diphtheria—the mouth and pharynx presented

severe cauterizations. They had taken, according to the directions, sixty drops in milk on two occasions.

FLATAU. Patient with *Caries and Necrosis of the Ethmoid, Syphilis of the Nasal Bone*. He had had syphilis for thirteen years: for one year the nose had been affected. Without experiencing any previous discomfort the left inferior turbinate was expelled in a necrosed state. For some time sequestræ, which were probably derived from the ethmoid, have come away from the right side.

B. FRÄNKEL showed a *Cotton-Holder*, with a bend suitable for the naso-pharynx, which can be introduced more easily than Baginsky's instrument.

FLATAU. Patient with *Hypertrophy*, which was said to have originated from the galvano-cauterization of the inferior turbinate. The naso-pharynx was filled with adenoid vegetations.

HEYMANN demonstrated:—1) *A Polypus removed by Autotomy from the False Cord*. 2) Patient, aged twenty-five, healthy until four weeks ago, when he suffered from want of air and slight hoarseness. After treatment of the hypertrophic rhinitis, the difficulty in breathing passed off. The mucous membrane of the pharynx and larynx is pale. The left false cord is transformed into a nodulated mass, and ulcerated in its posterior part. The left true cord is infiltrated, and presents small nodular excrescences. The upper third of the epiglottis is absent, the remainder is nodulated, thickened, and ulcerated. Iodide of potassium has produced no result: the ulcers, on the other hand, healed under the lactic acid treatment. The microscopic examination of nodules that have been removed showed numerous giant cells; the epithelium thickened; no tubercle bacilli. From this examination Heymann diagnoses lupus.

GRABOWER did not consider the diagnosis established. The microscopic picture was not conclusive. He himself had seen a case in which the larynx and an ulcer gave the impression of lupus, but which had healed under inunctions.

B. FRÄNKEL recommended a trial injection of tuberculin.

HEYMANN agreed as to the advisability of adopting this suggestion.

HOLZ showed a patient with *Pseudo-Leukæmia*. Several years previously he had seen a case in which there was peculiar swelling of the entire pharynx, the uvula and faucial pillars being distended like a balloon. The symptoms promptly disappeared under arsenic. The case shown has had a more chronic course. Some months ago, swelling of the pharynx, with difficulty in breathing, set in; uvula and pillars of the fauces present a granular aspect: naso-pharynx free: deafness: swelling of cervical and retropharyngeal glands.

KATZENSTEIN. *The Orthoscope, a New Laryngeal Mirror which gives Upright Images*. In order to obtain upright images Katzenstein uses two mirrors which are united in a prism. The instrument is made by Zeiss of Jena. The two polished surfaces are warmed and the instrument is used like a laryngeal mirror. Sufficient space remains for the introduction of instruments.

FRÄNKEL mentioned that Hirschberg had already attempted to obtain an upright image by a second mirror.

KATZENSTEIN said that in his orthoscope the novelty lay in the mirrors being united in one instrument.

KIRSTEIN demonstrated a *Frozen Section of a Child in the Position for Autopsy*.

Meeting, 8th May, 1896.

SCHÖTZ showed a case of *Congenital Closure of the Left Choana*. The faucial and pharyngeal tonsils were enlarged, and the septum was deviated to the left. Schötz did not venture to decide whether the latter condition was etiologically connected with the choanal closure. As a rule the closure is on both sides; when unilateral, it is more frequent on the right side. Schötz does not recommend the galvano-cautery for operating on these cases, on account of the number of sittings necessary, the liability to close again, and the proximity of the Eustachian tube, which predisposes to otitis media. Schötz makes an opening close to the septum, and widens it by means of an instrument like a lithotrite.

E. MEYER. *Bacteriological Examination of Rhinitis Fibrinosa*. After pointing out the clinical difference between nasal diphtheria and rhinitis fibrinosa, the etiology was discussed. The connection between the two diseases is not yet clear. Meyer has made a bacteriological examination of twenty-two cases of rhinitis fibrinosa. Loeffler's bacillus was cultivated thirteen times in its full virulence; in nine cases it was not found. Although there is the possibility that in these cases, also, the diphtheria bacillus was present at an earlier stage, it appears to Meyer more correct to assume that rhinitis fibrinosa is due to diphtheritic infection; it may, however, be also caused by other micro-organisms.

GRABOWER. *Clinical Contribution to Study of the Innervation of the Larynx*. By the report of an interesting case of recurrent paralysis in tabes, which Grabower observed for a considerable time with H. Oppenheim, he proves also from the clinical standpoint the correctness of the fact discovered by him experimentally, viz., that the accessorius has nothing to do with the innervation of the larynx, and that the vagus is the sole motor laryngeal nerve. The case was under observation for more than ten years, was examined repeatedly with the laryngoscope, and a necropsy performed. The organs involved were investigated microscopically, partly by Oppenheim and partly by Grabower. By the demonstration of the microscopic preparations from the extra-bulbar accessory and vagus roots, Grabower proved that the vagus is the only motor nerve of the larynx, as the accessory roots appeared normal, while the vagus roots were much atrophied.

A. B. Kelly (Trans.).

ABSTRACTS.

DIPHTHERIA, &c.

Bark, John.—*Two Cases of Diphtheria in which Curetting of the Trachea was Employed after Tracheotomy.* "Lancet," July 25, 1896.

IN the first case tracheotomy was followed by relief, but after twenty-four hours the breathing became much embarrassed, and was not relieved by the use of feathers soaked in bicarbonate of soda solution. The tracheal incision was, therefore, extended down as low as possible, and the trachea and bronchi scraped with a small Volkmann's spoon with a long handle, and a small fenestrated curette with a long flexible handle. No anæsthetic was used. A firm, tenacious plug of membrane, about the size of the little finger, was brought up with instant relief. The curetting had to be repeated twelve times during the two subsequent days, and afterwards recovery was rapid. In the second case eighteen hours had elapsed after the performance of tracheotomy when cyanosis, inspiratory recession, and great exhaustion became marked. The tube being removed, exactly the same treatment was employed as in the first case, and with a similar happy result, two firm flakes of membrane being removed. The curetting was employed six times in all. In both cases the diphtheria antitoxin was employed. *StClair Thomson.*

Dubost.—*Septic and Pyæmic Complications of Non-Diphtheritic Anginas.* "Thèse de Paris," 1896.

THE author reviews the principal accidents that sometimes occur after anginas, and affirms that, in numerous cases, the pathogenic evolution is obscure. The increase of virulence of streptococci, frequently present in the normal buccal cavity, is probably the origin of septic complications; but it is necessary, although not possible to afford an absolute proof, to ascribe an important part to the toxins elaborated by the bacillus. Two unpublished cases are given. *A. Cartaz.*

Gossage, A. M.—*The Influence of Glycerine in Culture Media on the Diphtheria Bacillus.* "Lancet," Aug. 15, 1896.

RECOMMENDS the addition of about nine per cent. of glycerine to the culture media for the diphtheria bacillus, and prefers glycerine serum to glycerine agar, as the growth is usually greater and the appearance of the bacilli grown more characteristic. *StClair Thomson.*

Kanthack, A. A —*Metachromatism in Diphtheria Bacilli.* "Lancet," Aug. 22, 1896.

DOES not allow that there is a single morphological or biological character, a single chemical staining reaction of absolute or specific value, which will enable us to say with certainty that a bacillus resembling the Klebs-Loeffler bacillus is or is not the true bacillus—that is, assuming that we are not biased by the clinical knowledge of the cases. Such being his belief, he ventures to protect the tyro from a misconception, warning him against a test which depends on a phenomenon which may be produced with almost any organism in the presence of simple chemical substances. However characteristic metachromatism is—and,

indeed, it is striking—it is not characteristic of the true diphtheria bacillus as compared with the false one; hence as a diagnostic test it is valueless.

St. Clair Thomson.

Kassowitz (Wien).—*Has Antitoxin an Immunizing Power in Man? A Critical Study with regard to the Laugerhaus Case.* “Wiener Med. Woch.,” 1896, No. 21.

THE 1895 diphtheria epidemic was unusually benign, for which reason the serum treatment seemed to show good results. Soerensen in Copenhagen had out of thirteen tracheotomies only one death, and all these cases were treated without antitoxin. Antitoxin has now established a great reputation for itself, and, although the sudden death of Laugerhaus' child in consequence of a prophylactic injection at first caused great excitement, the case is not, however, unique, another case being on record. Where the disease itself cannot prevent a second attack, it would be curious if an artificial substance would do it. Also the disease treated with serum does not prevent a second attack, as is observed in some cases. Of eight hundred and sixty-six cases with prophylactic injection sixty-five were affected with diphtheria. Widerhofer has only recently had a separate pavilion for diphtheria. In former times the diphtheritic children were in the same rooms with other patients, but yet there never arose an epidemic of diphtheria in the hospital. In Halle, of one hundred and twenty-five immunized children in the clinic, three caught diphtheria; whilst of fifty others in the like circumstances and not immunized only one was affected. Immunized people take diphtheria from one day to sixteen weeks after the injection, so that it cannot be said that only those are affected which were infected previous to injection. The author concludes that the immunization is useless, because, as Behring says, “the possibility of cure depends on the possibility of immunization.” It must also be concluded that the serum treatment is without any effect.

Michael.

On the Relative Strengths of Diphtheria Antitoxic Serums. Report of a Special Commission. “Lancet,” July 18, 1896.

THE results obtained from the use of antitoxin have been less striking in England than those obtained on the Continent. In order to try and explain the difference of the results obtained, the “Lancet” instituted the inquiry, of which we here have the results. The following table gives the quantities of the serums on the market in July, 1896, that must be injected in order to introduce a dose of 3000 units—that now recommended by Behring for severe cases. In this connection it is mentioned that there is nothing sacred in these numbers, and that where considered necessary much larger doses—20,000 units—may be, and have been, used with the best possible results, since excess of antitoxin can apparently do no harm, and may often exert a most beneficial influence.

Source of Serum.	Estimated number of units in bottle.	Quantity required for dose of 3000 units.
British Institute of Preventive Medicine ...	700	42 c.c.
Barroughs, Wellcome, & Co.	100	300 „
Bacteriological Institute, Leicester.....	400	150 „
Behring, Hoechst, Germany	600	12 „
Schering, Berlin	875	17 „
E. Merck, Darmstadt	150	100 „
Pasteur Institute, France.....	300	100 „
Institut Sérothérapeutique, Bruxelles.....	2000	15 „
William Vogt, Geneva	350	85 „

The conclusions are:—(1) That a common standard of estimating the strength of antitoxic serum should be agreed upon by English manufacturers. (2) That no

serum should be sent out containing less than sixty normal units per cubic centimètre. (3) That antitoxic serum of higher strengths must also be provided to meet the requirements of treatment in more severe cases of diphtheria. (4) That every sample of antitoxic serum sold should be plainly marked with the antitoxic strength of the serum (number of normal units of antitoxic serum per cubic centimètre), the quantity of serum present in the bottle, and the date of issue. *St Clair Thomson.*

Soerensen (Copenhagen).—*Serum Treatment of Diphtheria in the Begdam Hospital in Copenhagen.* "Therap. Monats.," 1896, No. 8.

THE author gives his statistics, and says:—The mortality of the cases treated with and without serum is nearly the same. The differences in the course of the disease were even less. Neither the mortality nor the development of the disease is influenced in any visible manner by serum treatment, but the curative influence of the serum cannot be excluded with certainty. Some cases were very favourably influenced, and secondary affection of the deeper air passages is certainly more rarely observed in cases treated with serum. But if there is already laryngeal diphtheria, and especially commencing stenosis, the injection cannot prevent the further progress of these symptoms. *Michael.*

MOUTH, &c.

Chassy.—*Variculous Angina: its Value in Diagnosis and Prognosis of Variola.* "Thèse de Paris," 1896.

FROM the examination of eight hundred and nineteen cases of variola, Chassy concludes that angina appears always at the same time as the cutaneous eruptions—viz., at the end of the third day. It is frequently very marked before the cutaneous manifestations; it has the same evolution—macules, papules, vesicles, to pustules. The eruption in the throat is sometimes accompanied by peritonsillar and sub-maxillary cedema; and angina, by the coincidence with the eruption of the skin, gives an easier diagnosis. *A. Cartaz.*

Gaultier, E.—*Pneumococcal Affections of the Pharynx.* "Thèse de Paris," 1896.

UNDER this title the author describes the various forms of angina caused by the presence of pneumococcus. He divides these varieties into five—suppurative, erythematous, follicular, pseudo-membranous, herpetic. The symptoms of these forms, frequently connected and clinically difficult to separate, are similar to those of pneumonia—intense fever, with high temperature, violent shivering, etc. The local symptoms do not differ very much from those of ordinary angina not due to the pneumococcus. *A. Cartaz.*

Helbnig (München).—*On Muscular Macroglossia.* "Jahrbuch für Kinderheilk.," Band 41, Heft 3 and 4.

IN a five-months-old child the author observed a tongue enlarged in all diameters. A portion of the tongue is always outside the mouth. The food is taken easily. Seen some months later, the organ is more enlarged, and cannot be drawn into the mouth. It was treated with Paquelin's cautery, and within a few weeks the tongue could be retracted. Death occurred from croup some months later. The examination of the tongue gave the same results as that of hypertrophy of other muscular organs. *Michael.*

Thoyer-Rozat.—*Retro-Pharyngeal Abscess in Children.* "Thèse de Paris," 1896.

IN this thesis Thoyer studies specially the idiopathic abscess, leaving apart the symptomatic. These suppurations are more frequent than is supposed; the insidious origin, the serious complications, make these abscesses a dangerous lesion. He relates numerous cases of sudden death. This accident is due to spasm, caused by compression of nerves, or by reflex action.

After describing the symptoms he discusses the treatment, and advises incision through the mouth, the external opening being reserved for abscesses deep or laterally situated, or in case of spasm of jaws preventing opening of the mouth.

A. Cartaz.

NOSE AND NASO-PHARYNX, &c.

Bayer (Brüssel). — *Ozœna: its Etiology and Treatment by Electrolysis.* "Münchener Med. Woch.," 1896, Nos. 32 and 33.

THE author concludes:—Ozœna is a tropho-neurosis, consisting in—(1) An anomaly of secretions of the nose, naso-pharynx, and pharynx. This secretion favours development of the specific microbe which produces the characteristic fœtor. (2) Disturbances of nutrition and atrophy of the mucous membrane. (3) A rhinitis consequent upon the secretions. The best treatment of ozœna is electrolysis; but this treatment is not without danger.

Michael.

Black, A. M. (Denver).—*Nasal Sarcoma cured by Operation.* "New York Med. Journ.," Aug. 15, 1896.

THE patient, a woman of thirty-eight, was brought to the author by a medical man on account of an unaccountable rise of temperature, 101 degrees Fahr., the fever being of ten days' duration, and combined with frontal headache, with right-sided nasal occlusion of the same duration, which had been complete for eight days. There was a history of slight right-sided nasal obstruction and nasal hæmorrhage, but the duration of the trouble was not known. A hardish lobulated mass occupied the right side of the nose, causing deviation of the septum and general enlargement and redness of the nose; the growth also projected into the naso-pharynx. Under ether most of the growth was removed with snare and curette, and what was left was removed subsequently under cocaine anæsthesia, and trichlor-acetic acid was used as a caustic. The case had been under observation for two years, with no sign of recurrence. The bulk of the tumour consisted of rather large round and oval cells, showing an alveolar arrangement in parts, and was considered an undoubted sarcoma.

R. Lake.

Chapard.—*Relation of Rachitic Deformities to Chronic Obstructions of Superior Respiratory Tract.* "Thèse de Paris," 1896.

IN this very interesting pamphlet, Chapard notes the great influence over the thoracic development of chronic obstructions of respiratory tract (hypertrophied tonsils, adenoid vegetations, nasal obstruction, etc.). By diminishing the amplitude of breathing, the lung is atrophied, the thorax is less opened, and little by little is deformed, and these deformations become more and more marked, especially if the child is rachitic. These deformations are not characteristic of the nature of obstructions. He studies each variety, and advises early treatment of the etiologic factor and after-treatment of spine deformations—lordosis or scoliosis.

A. Cartaz.

Escat.—*Congenital Stenosis of the Nasal Fosse and of the Naso-Pharynx.*

"Arch. Internat. de Lar.," May and June, 1896.

ALTHOUGH adenoid vegetations are frequently present in children affected with congenital deformity of the facial skeleton, the result possibly of the necessary habit of mouth-breathing, these hypertrophies are nevertheless found to be absent in a certain number of individuals presenting an appearance resembling that of the adenoid facies. It is of this class that the author gives a clinical sketch, illustrated by three cases. Ruault has reported an instance occurring in a girl of thirteen, in whom the transverse diameter of the face was atrophied, the nasal fossæ narrow, and the palate arched, but in whom the pharyngeal tonsil was unusually small. The mental development was in a state of arrest in this case, and a review of writings concerned with congenital mental degeneracy shows that a similar facial deformity has been frequently noted in such cases.

The first illustrative case is that of a youth of twenty-two, an imbecile and epileptic, with well-marked microcephalus, lateral flattening of the facial skeleton, and a facial angle of sixty degrees. The nose, prominent in profile and arched, was extremely narrow. The alæ were but slightly indicated, and the levator muscles appeared to be atrophied. The mouth was kept widely open, both upper and lower sets of teeth were irregular, and the chin of the "runaway" order. The palate was markedly arched and narrow, and the lack of lateral development was very noticeable in the thorax. The naso-pharynx, of the full height, was much diminished in sagittal and lateral diameter, but no hypertrophy of the soft structures was present.

In the second case—that of a boy of eleven—a similar facial construction was evident, and mental torpor was marked. The choanæ, though very narrow, were quite free from obstruction by the pharyngeal tonsil, which was of normal size. At the instance of the parents the latter was removed, but without any modification of the oral respiration necessitated by the narrowness of the nasal fossæ.

In the third case—that of a man of fifty-six, who suffered from childhood with great difficulty of nasal respiration—a similar conformation was remarkable. The pharynx in particular was extremely narrow, and the bucco-pharyngeal isthmus had the appearance of that of a child of five or six. No trace of hyperplasia or of cicatrization of the soft tissues was present.

Speaking generally, the appearance of cases of congenital stenosis is analogous to that due to acquired stenosis, the result of adenoid vegetations; but, in addition to the facial and thoracic deformity, mal-developments of the cranium (particularly micro- and dolicho-cephaly), and also of the auricles, and of the limbs, are frequently met with. In a few instances naso-pharyngeal stenosis has also been associated with macro- and brachy-cephaly.

As in the first case described, the nasal fossæ may be reduced to a mere slit without any abnormality of the septum. The pillars of the fauces are situated unduly near the middle line. The posterior pillars are very short, being attached unusually high up, while the inferior border of the velum, when fully relaxed, closely approaches the back wall of the pharynx. The latter circumstance renders posterior rhinoscopy difficult, and digital examination is necessary in order to establish the absence of adenoid hypertrophy.

The symptoms noticeable in this class of case are respiratory, auditory, vocal, and intellectual. Although middle ear derangement is observed, the deafness frequently present is in a measure attributable to psychic debility. The voice lacks timbre and sonority, and is to be distinguished from that characteristic of adenoid vegetations, in which the nasal vowels "an," "en," "on" are suppressed.

The intellectual symptoms are due to a primary congenital psychic debility,

and, unlike the aprosexia of adenoid subjects, are in no way modified by the efforts of the rhinologist.

Finally, heredity is an important factor in the pathology of the disease, and not only is there frequently a family history of mental unsoundness, but even of similar facial deformity in the forebears. *Ernest Waggett.*

Gardner, Bellamy.—*A Note on the Administration of Nitrous Oxide Gas, with Oxygen, for the Removal of Adenoid Growths.* "The Clin. Journ.," Sept. 2, 1896.

THE advantages claimed for this anæsthetic are: (1) It is not attended with danger to life; (2) no preparation for an operation is required; (3) hæmorrhage is not affected by it; (4) jactitation and cyanosis produced by pure nitrous oxide are absent; (5) any position desired by the operator may be safely assumed; (6) the available anæsthesia is ten or fifteen seconds longer than that yielded by gas alone; (7) unpleasant after effects are of very rare occurrence. *Middlemass Hunt.*

Gillette, A. J.—*Torticollis due to Adenoid Vegetations and Chronic Hypertrophy of the Tonsils.* "New York Med. Journ.," Aug. 1, 1896.

THE author quotes three cases of torticollis in which the sole probable cause was either adenoids or enlarged tonsils. Two cases, aged respectively seven years and sixteen months, were both subject to adenoids, and the former also to enlarged tonsils. Tonsils were removed with a slight improvement in the latter case, the former being cured by the usual operation, and the other will require operation. In the third case the torticollis was of about six weeks' duration and had not yielded to ordinary remedies. The author was unable to discover any cause except a large quantity of adenoid vegetations, and the only history was one of a cold some six weeks before, just previous to the commencement of the torticollis. The adenoid vegetations were removed, and in two or three days the deformity had entirely disappeared. *R. Lake.*

Keen, W. W.—*Three Cases of Plastic Nasal Surgery.* "Therapeutic Gazette," July 15, 1896.

1. CASE of saddle-shaped nose, the result of fracture eighteen years previously. A transverse incision was made just above the ale, and the superficial tissues loosened as far as the border of the frontal bone on each side. An artificial bridge consisting of two plates of silver soldered together and gold-plated was then inserted, and the opening closed by Halsted's subcuticular suture. The result has been excellent, and the gold plate has never caused the slightest inconvenience.

2. Case in which entire nose was removed for sarcoma. An artificial nose of silver, with a flange below which hooked behind the bone and held it in place, was constructed to hide the large hole left after the healing of the parts. The new nose was painted to resemble flesh colour as near as possible.

3. Case in which a markedly arched Roman nose was converted into a straight Grecian nose, by chiselling away the prominence of the bones after dissecting up the soft parts. A very good result was obtained, the scar being scarcely visible.

Middlemass Hunt.

Mackenzie, Hunter.—*A Case of Diffuse Papillomatous Degeneration of the Nasal Mucous Membrane.* "Lancet," Aug. 15, 1896.

OCCURRED in a man, aged thirty. There was no history of syphilis, but he was somewhat alcoholic. The mucous membrane of both nostrils was studded throughout by numerous sessile growths, varying in size from a pin's head to almost a grain of rice. They were most abundant on and about the upper regions.

Several of the larger growths were removed with the cold snare, but the greater number could be detached only with the nasal curette. Four months afterwards there was no recurrence. Microscopical examination showed the undoubted papillomatous character of the growth.

StClair Thomson.

Massei.—*A Case of Caseous Rhinitis.* "Arch. Ital. di Laring.," April, 1896.

A CASE of caseous rhinitis, lately observed and cured, formed the basis of a clinical lecture, in which the author discussed (1) the symptoms and (2) the different opinions. Coryza caseous may be dependent upon different causes—as in growths, etc. He believes the name of "caseous" more suitable than that of "cholesteatomatous"; and having confided the bacteriological researches to one of his assistants, Dr. Guarnania, he announces that the micro-organism which Sabrazès considered as a filamentous bacterium is, on the contrary, the streptothrix alba, already isolated, cultivated, and examined by Prof. de Giaxa, of Naples, while studies and experiments are still in course. He believes that three elements are necessary for the production of the caseous rhinitis—(1) an abundant purulent secretion in the nose; (2) an obstacle to its free issue; (3) the presence of the streptothrix alba, which finds a favourable *terrain* for its germination. Further relations by Dr. Guarnania are promised.

Massei.

Moizard.—*Treatment of Whooping Cough by Nasal Insufflations.* "Journ. de Med. et Chir. Pratiques," Aug. 10, 1896.

SINCE Michael suggested this method of treatment, Moizard has employed, with great benefit, nasal insufflations of antiseptic powders. He uses this powder:—

Benzoin (pulv.)	10 parts.
Salicylate of bismuth	10 "
Quinine (sulphate)	2 "

The insufflations are made five times a day. In a week, and less, the fits of coughing are reduced in number and intensity and the cure is rapid. A. Cartaz.

Piaget.—*The Self-Defence of Nasal Cavities against the Bacterial Invasion.* "Thèse de Paris," 1896.

AFTER an elaborate review of StClair Thomson's, Wurtz's, and Lermoyez's papers, the author relates the numerous experiments which he has conducted for the study of bacteria of the nose. In the normal state the nasal cavities are free from microbes, except the anterior part and vestibule. The culture of nasal mucus collected in the remote parts is sterile; the nasal cavities are normally aseptic. That asepsis is the result of the structure of the canal, of the ciliated epithelium, and specially of the bactericidal properties of the nasal mucus. That bactericidal action is absolute for carbuncle bacteria, very marked for Loeffler's bacillus, and less marked for staphylococcus and streptococcus. This asepsis explains to a certain degree the immunity of nasal operations.

A. Cartaz.

Waterhouse, H. F.—*Adenoid Vegetations in the Naso-Pharynx, and their Treatment.* "Clin. Journ.," Aug. 26, 1896.

ADENOIDS are more common in boys than girls—in the proportion of two to one—and are as frequently met with in healthy and vigorous as in strumous children. Heredity plays an important part in their causation. For purposes of diagnosis posterior rhinoscopy can only be used in less than half of all cases, and in children under six is practically useless. Digital examination is to be preferred. If growths have given no trouble before puberty there is little probability of their causing symptoms later in life.

In adults one may use galvano-cautery with cocaine anæsthesia, and two or

three sittings will be sufficient to remove growths safely and efficiently. In children always use a general anæsthetic to save shock, and complete operation at one sitting. If tonsils also enlarged, remove them without an anæsthetic a few days before, especially in young and weakly children. In older and stronger children, may first remove tonsils and then adenoids under one administration of anæsthetic. The safest position and the most convenient for operation is with the hanging head. Dalby's position is also safe if using gas. Any other position is unsafe.

Of anæsthetics, chloroform is the most handy and the most easily administered, but even in careful hands so many deaths have occurred in this operation that the author, though he has used it hundreds of times "with fear and trembling," has now taken to nitrous oxide. Given with oxygen it is the best anæsthetic for most cases of adenoids.

With regard to instruments, Gottstein's curette is the most generally useful, but when growths are firm forceps must be used. Of these, Löwenberg's remains the best. In weakly children use forceps for whole operation, as hæmorrhage is less than when curette is used.

Middlemass Hunt.

LARYNX.

Kirstein, A.—*Autoscopy of the Upper Air Passages.* "Therap. Monats.," July, 1896.

To see directly into the larynx and trachea the observer, wearing a frontal mirror, or, still better, a frontal lamp, and sitting opposite the patient, places the patient in such a position as to bring the axis (theoretical) of the mouth (with the tongue removed) and that of the trachea as nearly as possible into a straight line. The tongue and epiglottis alone obstruct his view of the larynx. He must therefore make a depression in the tongue reaching as far backwards and downwards, and as exactly in the axis of the trachea, as possible. In doing so he will at the same time pull the epiglottis out of the way. This can be done with a long, narrow tongue depressor, slightly bent downwards at its distal extremity. Care must be taken not to produce retching. By this means he will be able to see: (1) in very numerous cases, the posterior wall of the larynx; (2) often, the posterior two-thirds of the vocal cords; (3) seldom, the whole larynx, including the anterior commissure of the cords. The amount of the trachea visible will vary correspondingly. The part most easily seen, viz., the posterior wall of the larynx, is the most difficult to observe accurately with the laryngoscope. Little children are most difficult to examine with the laryngoscope, most easy by the direct method.

This method is of great service in finding and removing foreign bodies in the air passages. It is also often of great value in laryngeal operations (specially polypi), permitting the complete removal of even large tumours in one sitting (Bruns).

The larynx and trachea can be very easily and thoroughly examined in all children deeply under chloroform. If the anterior commissure is not visible, it can easily be brought into view by gently pressing the thyroid cartilage backwards.

The importance of this simple procedure in children suspected to have papilloma of the larynx is at once apparent. Should papilloma be found, it would be wise to at once tracheotomize, and either then or later proceed to operate.

In little children good results are often obtained even without narcosis.

Arthur J. Hutchison.

Krebs (Hildesheim).—*Treatment of Chronic Pharyngo-Laryngeal Catarrh.* "Therap. Monats.," 1896, Nos. 6 and 7.

THE author believes that the dried secretion in cases of pharyngitis and laryngitis sicca is not produced *in loco*, but that it comes of the nose. Therefore the nose must be treated in such cases. Many chronic catarrhs are only neuroses, and must be treated by psychic therapy. The author concludes with a review of the different methods of local therapy.

Michael.

Neurath (Wien).—*Laryngeal Syphilis in Children.* "Jahrbuch für Kinderheilk.," Band 41, Heft 3 and 4.

A CHILD, six years old, diseased by hoarseness, dyspnoea, and difficulties of swallowing for a year. The examination showed a perforating ulcer in the hard palate, necrotic sequestræ in the nose, ulceration of the epiglottis and the vocal bands. Inunctions. Improvement. Relapse of the symptoms; sudden death by asphyxia. The *post-mortem* examination confirms the diagnosis.

Savery, Frank, and Semon, Felix.—*Bilateral Paralysis of the Recurrent Laryngeal Nerves due to Malignant Stricture of the Œsophagus.* "Lancet," Sept. 19, 1896.

THE interest of this case centres in the occurrence of complete bilateral paralysis of the recurrent laryngeal nerves. Whilst more or less incomplete paralysis of both these nerves is not of infrequent occurrence, really complete bilateral paralysis is but exceedingly rarely met with, owing to the fact that the lesion which causes the laryngeal paralysis almost always ends fatally before the stage of complete paralysis is reached. The symptoms resulting from this condition have always been described as complete aphonia with dyspnoea—the latter on exertion only. The present case teaches that another important symptom may be the result of the bilateral paralysis—viz., impossibility of taking nourishment in the ordinary erect position. The explanation is that when both recurrents are paralyzed closure of the glottis is impossible, and food and drinks are, therefore, apt to penetrate into the larynx. The mucous membrane of the larynx being supplied by the internal branch of the superior laryngeal nerve, the sensibility of the larynx is not affected by the lesion under consideration, and hence the entrance of any foreign body into the larynx will be immediately followed by reflex cough, as in this case. The position recommended by Wolfenden for cases of painful dysphagia was found to be successful—viz., horizontal position on the side, with the head well over the edge of the bed, and fluid nourishment to be taken through a feeding-cup inserted into the lower angle of the mouth. When drinking in this position the fluid passes, not over, but by the side of the larynx through the hyoid fossa, and penetrates into the Œsophagus without coming in contact with the posterior surface of the larynx. Semon warmly recommends the adoption of this method in cases of tuberculous and malignant disease of the larynx, and malignant disease of the Œsophagus. He suggests its use in post-diphtheritic anæsthesia of the larynx in which the entrance of nourishment into the air passages must be feared.

St Clair Thomson.

Stoker, G.—*Impaired Movements of the Vocal Cords.* "The Clin. Journ.," June 10, 1896.

FOR clinical purposes, the causes of impaired movement of the cords may be divided into neuropathic, myopathic, obstructive, and functional. Under the head of "obstructive" come all cases of thickening of the laryngeal mucous membrane, new growths, inspissated mucus, and foreign bodies.

Mr. Stoker is of opinion that an ordinary catarrh does not usually affect the

laryngeal muscles; that in chronic syphilitic laryngitis there is always thickening of the inter-arytenoid mucous membrane; and that a triangular opening between the vocal cords is an essential characteristic of functional aphonia. In laryngeal phthisis, he finds it is no use to apply irritating treatment, such as scraping and rubbing in lactic acid, as the only result is to create a tuberculous ulcer which one never succeeds in healing.

Middlemass Hunt.

E A R.

Adams, J. L.—*Thrombosis of the Lateral Sinus, with Recovery after Operation.* "New York Med. Journ.," Aug. 29, 1896.

THE author narrates a successful case of removal of a septic thrombus from the lateral sinus in which the jugular was not exposed in the neck, and in which the lower end of the thrombus does not appear to have been removed. He then appends a very clear and concise summary of the history of the operation, and the views held by those who have considerable experience in this operation.

R. Lake.

Bacon, G.—*A Case of Brain Abscess secondary to Chronic Suppurative Otitis Media and presenting Unusual Symptoms. Operation. Recovery.* "New York Med. Journ.," Aug. 15, 1896.

THE patient, thirty-two years of age, who suffered with otitis media suppurativa on the left side, was seized with intense headache on December 5th, 1895, aural pain, and fever (104° F.); in the afternoon he had general convulsions and foamed at the mouth. The evening temperature was 100° F.; pulse, 104; respiration, 26. The emarginated mastoid was opened; the lateral sinus, being wounded and containing fluid blood, required plugging. For some days he was better; but aphasia and a rigor were observed on the 9th. The former becoming marked and the temperature continuing high, a second operation was undertaken the next day. A piece of bone was removed three-quarters of an inch in diameter, and two inches above the meatus, and pus was found between the brain and tegmen tympani, and a large abscess cavity was found in a direction in- up- and backward, the amount of pus being in all about an ounce and a half. There was reaccumulation of pus on the 14th; and on June 1st all aphasia is gone, and the facial palsy which had existed since the first operation is disappearing.

R. Lake.

Bernstein, Edward J.—*Primary Tuberculosis in Relation to the Middle Ear.* "Charlotte Med. Journ.," June, 1896.

THE middle ear may become infected at any period in tuberculosis, and in a considerable number of cases it is the primary seat of the disease. If any suspicion, seek for bacillus; but remember a negative result does not exclude, nor the actual presence of the bacilli is not, *per se*, conclusive of tubercular origin. The membrana tympani may be first affected, small greyish-yellow elevations forming, which on breaking down leave numerous perforations—the "sieve-like" drum. The meatus is large and wide, owing to the absorption of subcutaneous fat, and the skin lining it is pale, hard, and dry. The left ear is attacked by preference, but, though usually unilateral, it is often bilateral. In conclusion, Dr. Bernstein relates two cases of primary (?) tuberculosis of the middle ear occurring in his own practice.

Middlemass Hunt.

Clayton.—*A Case of Peripetrous Suppuration.* "Birmingham Med. Review," Aug., 1896.

A GIRL, aged twelve years, who had suffered from a purulent discharge from the left ear from infancy. After severe headache, lasting five weeks, accompanied by rigors, she had right hemiplegia.

The left mastoid antrum was opened with a trephine, but nothing abnormal found. The left Rolandic area was then exposed, and an exploring needle inserted through the bulging dura mater. Several drachms of cerebro-spinal fluid were withdrawn, and the pulse and respiration improved. Drainage tubes were inserted, and for three days the patient did fairly well. Then the mastoid trephine wound looked unhealthy, and less than one drachm of pus was found beneath the dura mater at the bottom of the trephine hole. Also she was trephined over the temporo-sphenoidal region, and a needle passed in order to explore the parts in relation with the temporal bone, but no pus was reached.

Two days later proptosis of both eyes was noticed—this increasing on the left side—the conjunctiva became chemotic, and the globe became very prominent. Cerebro-spinal fluid escaped from the upper trephine hole and pus from the mastoid.

About a week after this fluctuation was noticed over the upper eyelid and external angular process, and a quantity of thick, fetid pus escaped on incision. The patient died a few hours later.

Post-mortem.—Dura mater at the bend of the left lateral sinus and at apex of middle fossa on left side abnormal, the point of left temporal lobe being adherent. No pus within the dura mater, but a small abscess in the extreme apex of the left lower temporal convolution. The convolutions over it were greenish in colour, and their vessels markedly injected. Left mastoid antrum contained yellow inflammatory material, which had entered and completely plugged the left lateral sinus, and had burrowed some distance along the posterior surface of the petrous bone, between the latter and the dura mater. On the front surface of the bone there was a similar condition, and the pus had entered the orbit through the sphenoidal fissure, and lay within and among the structures embedded in the capsule of Tenon, and had made its way out into the subcutaneous tissue of the left temporal region.

B. J. Baron.

Gellé.—*The Aura of Auricular Vertigo.* "Ann. des Mal. de l'Oreille," March, 1896.

THE author discusses the sensorial and motor premonitory phenomena of the attack of auricular vertigo, showing that irritations of the auditory nerve produce in man not only divers perturbations of equilibrium and movements, but that they also act upon the psychological centres, provoking veritable hallucinations of sight and movement which only clinical observation can discover.

R. Norris Wolfenden.

Martin, W.—*Some Remarks on Chronic Aural Catarrh.* "Charlotte Med. Journ.," May, 1896.

ADVOCATES the use of pilocarpin injections in all cases of advancing aural catarrh where ordinary treatment has been of no avail. In selected cases this method of treatment produced improvement in seventy per cent. In cases not selected benefit followed in twenty per cent. In the atrophic form it is of no use, and then the only resort is operation for removal of the tympani and ossicles, which is now recognized as beneficial in a large class of cases.

Middlemass Hunt.

Richardson, C. W. (Washington).—*A Case of Hemorrhage from External Auditory Canal.* "Ann. Ophth. and Otol.," July, 1896.

THE author refers to five published cases, and proceeds to narrate his case, which was briefly: A negress, thirty years of age, who had recently been under treatment for tertiary syphilis, complained of frequent hemorrhages from the ear (left); these gradually became more frequent, until in and since March, 1895, it has been practically continuous. The only obvious objective symptom was the blood in the meatus, no bleeding point being observed; the subjective symptoms being pain, especially over the mastoid and parietal regions, and on introducing the speculum, severe tinnitus, vertigo, and increasing deafness. Treatment has been most unsatisfactory, and the source of the bleeding is supposed by the author to be the cerumenous glands.

R. Lake.

Thornton, Bertram.—*The Telephone and its Application to the Deaf.* "Lancet," Aug. 15, 1896.

A DESCRIPTION with two illustrations of a modification of the telephone, which promises to be of material use in the education of those deaf mutes who possess a fragment of hearing power; and it has the following advantages over the single speaking-tube that is sometimes used:—(1) That the wires from several receivers can be coupled up to one transmitter, and thus a teacher can instruct a group of children at the same time; and (2) that, as it is not necessary for the teacher to apply his mouth close to the transmitter, the pupils have a full view of his facial expression and lip movements, which is not the case when he has to direct his attention and his voice into the mouth of a speaking-tube or trumpet.

St Clair Thomson.

Wall, G. A. (Topeka, Kan.).—*Mastoid Abscess, complicated with Lateral Sinus Thrombosis and Diabetes—Recovery.* "Annals Ophth. and Otol.," July, 1896.

THE patient was a woman, sixty-two years old, who was attacked with otitis media, with perforation on the right side and hemorrhagic otitis on the left; the membrane on this side was incised, and quite a large quantity of blood escaped. Both ears now became the seat of suppurative otitis. The urine was examined and found to contain seven per cent. of sugar, for which she was treated with codeine. The left ear was now—one month after the first attack—the only one discharging. She now suddenly had a rigor, followed, two days later, by another; tenderness over the mastoid was well marked, with induration along the anterior border of the sterno-mastoid. Ten days later the antrum was opened, giving exit to much thick pus. The lateral sinus was also exposed and found thrombosed; the thrombus was removed with a curette. The internal jugular was not tied in the neck for the following reasons: the grave history of these cases; the age of the patient; the large amount of sugar; and her great debility. The result quite justified the course pursued, as the patient not only made an uninterrupted recovery, but, under dietetic treatment, her excretion of sugar was reduced to one-half per cent. The article also contains a brief review of the subject, and the author expresses his belief that all cases of hemorrhagic otitis are renal in origin.

R. Lake.

COMPLIMENTARY DINNER TO SENOR MANUEL GARCIA,
by the GLASGOW SOCIETY OF MUSICIANS, Sept. 30th, 1896.

It is slightly deviating from our usual habits, perhaps, to give a brief abstract of a purely social meeting, but we are sure that there is no living man we all delight to honour more than this celebrated teacher. Amongst the best known medical men present were Profs. Gairdner, Charteris, Coats, and Henry E. Clark : Drs. J. Cowan, Woodburn, J. W. Allan, Macintyre, Walker, Downie, A. B. Kelly, etc. Mr. Julius Seligmann, from the chair, proposed the toast of the evening, pouring forth a glowing eulogy on the renowned singer. It is, however, chiefly with the welcome accorded by the profession, in whose name Dr. J. Macintyre spoke, that we are chiefly concerned. He naturally chiefly devoted his remarks to the laryngoscope, saying that although Garcia was not absolutely first in the field, his discoveries were the first practical ones ; and though his original ideas and models had been to a certain extent modified, they practically remained the same, and his name would go down to posterity inseparably connected with the discovery of laryngoscopy.

REVIEW.

Handbuch der Laryngologie und Rhinologie. Band II., Theil I. (Wien : Hölder, 1896.)

THIS is the first part of the second volume of Heymann's manual of laryngology, and contains three articles dealing with the anatomy, the physiology, and the methods of examining the pharynx.

The first of these articles is by Prof. Disse, of Marburg, and treats in an exhaustive manner of the anatomy and development of the pharynx. This will probably be found to be the most interesting article of the three, and particularly that part devoted to the region of the naso-pharynx and pharyngeal tonsil.

The vexed question of the pharyngeal bursa is thoroughly gone into, and Dr. Disse takes up the position of Luschka and Killian, maintaining that the "bursa" is a distinct anatomical structure, quite independent of the pharyngeal tonsil. In most of the recent text-books the writers have followed Ganghofner and Schwabach, and identified the bursa pharyngea with the recessus medius of the pharyngeal tonsil. Dr. Disse objects to this view, and shows that Luschka's description of the bursa "as a sac one and a half centimètres long, whose closed end reaches to and even penetrates the periosteum of the basioccipital," proves that he could not have had in his eye the median recess of the tonsil, which only extends some millimètres into the submucosa. There is a difficulty, however, in explaining how Luschka should have found this "bursa" to be present,

"if not constantly, yet very often," when all other observers agree as to its rarity. Thus Schwabach met with Luschka's bursa only four times in twenty-nine subjects, and Dr. Disse himself only found it twice in about thirty examinations. In the embryo it is evidently much more frequently present, as Killian found it in fourteen out of forty-five specimens.

The important point for the clinician to note is, that the presence of Luschka's bursa cannot be made out by an examination during life. Only an anatomical dissection can determine if a blind sac, whose opening is situated in the median line of the pharynx, behind the pharyngeal tonsil, reaches to the periosteum of the basioccipital. The term, "bursa pharyngea," may therefore be dropped from all clinical descriptions of naso-pharyngeal disease.

The article on the physiology of the pharynx is by Prof. Einthoven, of Leiden. It is confined to a discussion of the muscular movements of the pharynx during speaking, breathing, swallowing, etc., and gives a brief but sufficient description of these acts. For the physiology of the mucous membrane and the glandular tissues, the reader is referred to other chapters of the work.

The article by Dr. Spiess, of Frankfort, on the methods of examining the pharynx, naturally resolves itself into a discussion of posterior rhinoscopy. In it the author does not confine himself to what his own experience has taught him, but describes and criticises the various methods and instruments which have been devised, from the time of Czermack downwards, to facilitate the examination of the naso-pharynx. We agree with Dr. Spiess, that frequently all the suggested helps become hindrances, though at times one or other of them may aid us in a troublesome case. Dr. Spiess thinks that cocaine never assists, but rather hinders, in a rhinoscopic examination. But we have frequently found that a dilute solution (two per cent.), sprayed through the anterior nares and over the palate, has quieted an irritable pharynx, and made an examination possible.

Regarding palpation of the naso-pharynx, Dr. Spiess insists that it should always *follow* posterior rhinoscopy; the hand supplementing, not supplanting, the eye. How often, by neglecting this rule, have post-nasal adenoids been diagnosed, and even operated on, when the rhinoscope would have shown that only a normal pharyngeal tonsil was present?

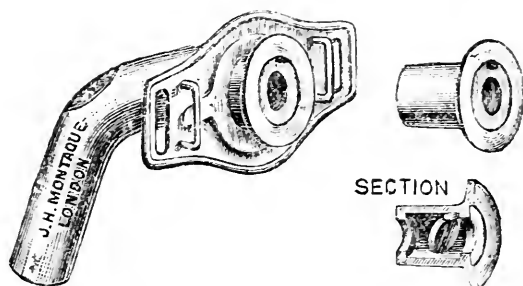
One method of examining the naso-pharynx the author omits entirely, or only mentions in connection with the use of Zaufal's speculum to condemn it: examination through the anterior nares. In the detecting of adenoid growths in young children it is especially useful. If a cocaine spray be thrown into the nasal passages, and a bright light employed, a view of these growths can always be obtained by anterior rhinoscopy. In this way we avoid making a digital examination till the child is under an anæsthetic at the time of operation.

Middlemass Hunt.

NEW INSTRUMENTS. PREPARATIONS. ETC.

A NEW FORM OF TRACHEAL VALVE. Philip de Santi. ("Lancet," July 25, 1896.)

This instrument is designed for those patients who have to wear a tracheotomy tube for several months, or even permanently. The objections to the usual form are, that when the patient attempts to talk he has to place his finger on the mouth of the tube, and on coughing the expectoration is voided in an uncleanly and unpleasant manner through the tube. There are several objections to the "pea valve," which was designed to overcome these objections. The movements of



the "pea" are noisy, the ball readily gets clogged, and it often gets out of order. These objections have not been overcome by the adoption of an india-rubber valve arrangement. In the author's invention a silver valve working on a hinge permits the free entrance of air on inspiration; on expiration, vocalization, or coughing, the valve is driven forwards and comes up tightly against a small silver inner rim, thus preventing any exit of air, mucus, etc. The advantages of this are:—(1) Its simplicity; (2) the facility with which it can be kept clean and sterilized; (3) the working of the valve is unaccompanied with any rattling noises; (4) the valve is airtight, and cannot be coughed out; and (5) the supply of air is but little diminished, considerably less so than in Luer's or Smith's valves. Two illustrations make the above description easily understood. *St Clair Thomson.*

QUER'S AURAL CURETTE. (Messrs. Down Bros., 21, St. Thomas' Street, Borough.)

A specimen of this elegant little instrument has been submitted to us for inspection, which looks as if it would prove of great service in those troublesome



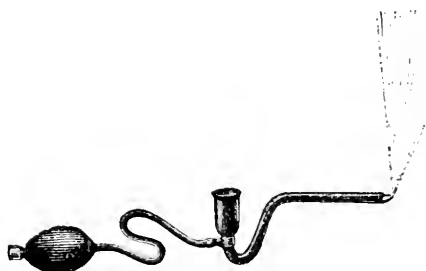
cases in which foreign bodies are found in the external auditory canal. When the foreign body is *near* the membrane, however, this instrument should not be used, as the lower or curette blade projects $\frac{1}{2}$ inches of an inch beyond the upper. The instrument in the cut is shown with the curette in the straight position for introduction and the erect for retraction.

NEW LARYNGEAL, NOSE, and PHARYNGEAL SPRAYS. (Chas. Midgley, Limited, 23, St. Anne's Square, Manchester. 3s. 6d. each net. Agent: Rogers, Oxford Street, London.)

These are most ingenious sprays, and are made in the three forms as shown in the woodcuts, and are the invention of Dr. A. Hodgkinson, of Manchester. They were originally made of glass, but this proved too brittle, and so they are



now made of vulcanite. The fluid to be used is dropped into the cup, and by this means an absolutely accurate and known amount of the solution (even as small a dose as two minims) is used. This is, of course, a great advantage when cocaine is used by the patient, or where, in kakosmia and allied conditions, other toxic remedies, as strychnia, are employed.



The small cost of these instruments will commend them especially to hospital surgeons, who often desire to order them for hospital patients.

THE JOURNAL OF LARYNGOLOGY, RHINOLOGY, AND OTOTOLOGY.

Original Articles are accepted by the Editors of this Journal on the condition that they have not previously been published elsewhere.

Twenty-five reprints are allowed each author. If more are required it is requested that this be stated when the article is first forwarded to this Journal. Such extra reprints will be charged to the author.

The Editors are not responsible for opinions expressed in original Articles or Abstracts in this Journal.

Editorial Communications are to be addressed to "Editors of JOURNAL OF LARYNGOLOGY, care of Rebman Publishing Company, Limited, 11, Adam Street, Strand, London, W.C."

THE ANTITOXIN TREATMENT OF DIPHTHERIA.

By LENNIX BROWNE, F.R.C.S.Edin.

Senior Surgeon to the Central London Throat, Nose, and Ear Hospital, etc.

"Old things need not be—therefore true,
O brother man, nor yet—the new."

CLOUGH.

EIGHTEEN months ago (May, 1895) I published in this journal some comparative statistics of the effects of diphtheria antitoxin, as judged by one hundred cases treated under my observation. This was followed by a somewhat extended criticism in "Diphtheria and its Associates," issued a month later.

My treatment of the subject was generally recognized as an impartial epitome of the serum treatment of diphtheria up to that date. My present purpose is to pursue the matter still further, not this time by a record of personal experience, but by a review of that of others as exhibited in the mass of individual communications, and of hospital statistics, under the burden of which the whole medical world may, in the interval, be said to have positively groaned.

Of individual accounts the large majority are without value, as they have referred either to isolated cases or to series so small as to be useless for the purpose of comparison. Of more extended reports, it is simple fact to state that of those in favour of antitoxin not one can be considered as entirely satisfactory, since the conditions of comparisons of the new with the old treatment have in no single instance been made on an equal basis. By all former returns, analogous to those of our own Registrar-General, any fatal case of diphtheria admitted into hospital as such has been recorded as a death from that disease, no matter what the actual cause; but in recent hospital and State reports on the serum treatment, it has become a practice to exclude cases complicated with other diseases, e.g., scarlet fever and measles, and to ignore as deaths from "diphtheria"

those due to complications and sequelæ, notwithstanding that the deaths would not have occurred had it not been for the primary diphtherial infection. Again, reasons have been given for excluding those in which injections have been made at an advanced stage of the disease; and yet again, those which have not been injected at all, because their hopeless character "would spoil statistics." All these have by a natural sequence been placed to the discredit of the non-serum treatment.

Numerous authors have pointed out—Winters of New York especially—that the percentage mortality as applied to serum treatment, forms a most misleading basis for calculations, if only because every sore throat however mild from a clinical point of view—in which a single Klebs-Loeffler bacillus has been detected, has been included in the list as a case of diphtheria. Kassowitz and many others have shown that in but few cities has the gross mortality from this disease been actually decreased; and, moreover, as I have previously pointed out, even in cities where great reduction in the percentage mortality has been reported as a result of the serum treatment, the decrease has not been so great as to compare favourably with the best results obtained by the older remedies on large numbers of cases in other cities, more particularly in our own isolation hospitals under the Metropolitan Asylums Board.

Whatever the general gravity of an epidemic of diphtheria may be, the malady is admitted to be particularly serious when it attacks children under five years of age, so that a comparison of the gravity of the cases is not to be obtained by differences of numbers at this period in the serum and non-serum treated cases, as claimed in the Metropolitan Asylums Board report for 1895, but by the proportionate death rate in each class at those years of life in which "the fatality of diphtheria is so notorious:" that, in point of fact, no case under five years of age can ever be said to be mild. The following figures illustrate the position:—

1894.—Prior to antitoxin.....	1171 cases.....	Deaths, 556 = 47·4 p.c.
1895.—With „ 	1013 „ 	379 = 37·4 „
1895.—Without „ 	440 „ 	118 = 26·6 „

Thus the mortality of cases treated without serum under five years of age in the metropolitan fever hospitals in 1895 is more than twenty per cent. less than that of those treated under the same conditions in 1894; and more than ten per cent. less than that of the serum-treated cases in 1895.¹

After all, it must, however, be candidly acknowledged that the serum treatment has received the approval of many eminent authorities. On the other hand, the following long, but by no means exhaustive, list demonstrates how numerous and various are the centres of observation that have furnished writers of repute who express themselves as either definitely adverse to the treatment or who deprecate the extravagant enthusiasm of some of its advocates:—

¹ A letter appeared in the *Times*, April 6th, 1896, written by a surgeon of some eminence, judging from character of the type accorded to it, and signed F. K.C.S., in which the opinion was expressed that the results of the antitoxin treatment of diphtheria are not to be decided "by collocations of Arabic numerals."

I entirely agree with this gentleman, albeit he was conveniently oblivious to the fact that all the reports—especially that of the Asylums Board, then under consideration—in favour of the success of the remedy have been calculated on percentage results, and therefore the position was only to be met by quotations of similar figures in the opposite direction.

Armstrong (New York).	Lahs (Marburg).
Benesch (Austria).	Langerhans (Berlin).
Bergmann (Berlin).	Lebraton (France).
Bernheim (Berlin).	Leichtenstern (Kota).
Canon (Berlin).	Macintyre (Glasgow).
Coakley (New York).	Magdelaine (France).
Elmer Lee (Chicago).	Mundorff (New York).
Ernst (New York).	Oertel (Munich).
Fürst (Berlin).	Perrigaux (Paris).
Gayton (London).	Rosenbach (Breslau).
Gerloczy (Buda-Pest).	Schleich (Breslau).
Glaser (Hamburg).	Soerensen (Copenhagen).
Gottstein (Breslau).	Soltmann (Leipzig).
Hagenbach (Basel).	Springorum (Magdeburg).
Hansemann (Berlin).	Stowell (New York).
Heller (Nürnberg).	Struck (U.S.A.).
Kassowitz (Vienna).	Variot (Paris).
Kohts (Strasbourg).	Vissman (New York).
Kraske (Freiburg).	Vulpus (Karlsruhe).
Kretschmann (Munich).	Wendlstadt (Kota).
Krobrynsky (Kolomea).	Winters (New York).
Krückmann (Neu Kloster).	Zappert (Vienna).

This list—mainly taken from abstracts published in this journal for 894-95-96—does not include the large number of observers who have had to admit that the serum treatment is accompanied by complications, and is responsible for sequelæ, some of which have increased the fatalities from the disease beyond that which was formerly observed under the older methods of treatment; for instance, cardiac failure (Baginsky), hæmorrhagic nephritis (Soerensen), albuminuria (Oertel, Hansemann, Benda, and Siegert), and petechiæ and fatal gastro-enteritis (Hagenbach); while other accidents, not always fatal, have been responsible for undue retardation of complete recovery.

To this list also must be added many observers—*e.g.*, Klebs, Fraser (Edinburgh), and Kortright—who, believing in the value of the serum when administered for the cure of the actual disease, have failed to support, or have withdrawn their adhesion to, the immunizing power of the serum when administered for prophylactic purposes—albeit, as Behring himself has put it, “the possibility of cure depends on the possibility of immunization.”

As an instance of how enthusiasm may blind observers to facts, the ratio of cases failing to be protected against the disease when immunization has been practised to any appreciable extent is alone sufficient to demonstrate its futility.

For example, Kassowitz reports that in Halle, of 125 immunized children in the clinic, 3 caught diphtheria, whilst of 50 others in similar circumstances, and not immunized, only 1 was affected. This author pertinently observes that where the disease itself cannot prevent a second attack, it would be curious if an artificial substance would do it.

I have no desire to press home too hardly the danger of an immediately fatal result of serum injection, of which an appreciable number of cases

have been reported: but such a risk is alone sufficient to condemn a prophylactic administration. Many other cases of alarming but not always fatal collapse are also recorded, where the remedy has been applied to the disease; and it is but fair to assume that to the injection, *per se*, many deaths should be attributed.

It has been largely claimed that the great advantage of the serum treatment is, that it is founded on a scientific basis; but from whatever practical point of view we may consider this dictum, it is difficult to see the grounds on which it can be sustained.

For example, it has been advanced that antitoxin counteracts the disease caused by the Klebs-Loeffler bacillus; nevertheless this organism is to be found for weeks and months after the membrane—the result of the bacillus—has entirely disappeared. The membrane itself has not been shown to separate more speedily under serum injections than by former methods of treatment; nor, finally, have the typical complications and sequelæ of the systemic toxæmia been less frequent or less severe in the antitoxin cases.

On this point Sternberg, an ardent advocate of serum therapy, while expressing the opinion that “the experimental and clinical evidence heretofore submitted appears to establish the value of the treatment when applied before the disease has progressed too far,” says “it must be remembered that the antitoxin has no power to destroy the diphtheria bacilli, or to relieve the suffocation resulting from obstruction of the larynx, or to cure an acute parenchymatous nephritis due to the action of the deadly toxin elaborated by the Klebs-Loeffler bacillus.”¹ May we not well ask what does the antitoxin cure?

On the other hand, on the first introduction of serum injections, we were told by Roux and others that all supplementary treatment, either local or general, was harmful to the success of the serum; but there is now hardly one advocate, however enthusiastic of antitoxin, who does not supplement it by the use of germicidal solutions—*e.g.*, corrosive sublimate—of a concentration of almost infanticidal intensity—to assist in destroying the bacillus; and of sprays, as of sodium carbonate or lime water, for assisting the separation of the membrane. In the same way, perchloride of iron continues to be administered internally to correct the deterioration in the quality of the blood: quinine and strychnia to combat the degeneration of nerve structures; and alcohol to counteract the systemic asthenia, all specific characteristics of the malady.

Nor, if we examine the scientific basis of the treatment from a bacteriological point of view, can we admit that anything like a fair proportion of the cures attributed to its use is due to impregnation of the serum with the specific toxin, seeing that the Klebs-Loeffler bacillus is only to be found alone in less than ten per cent. of the cases; and that in only this class—according to some of its apostles—should the serum be administered. Indeed, no less an authority than Loeffler, himself only a moderate supporter of antitoxin, has said that “coccal infections cannot be favourably influenced by serum.”

By an analysis of the figures of the Metropolitan Asylums Board for 1895, the mortality of cases treated without antitoxin in that year was

¹ Immunity and Serum Therapy, p. 16. New York, 1895.

13·4, showing a reduction of more than half that of 29·6, the proportion observed in 1894, before the introduction of antitoxin, and an almost equal reduction over that of those treated concurrently by serum, viz., 28·1. The experience of Winters is curiously parallel. He reports that in the Willard Parker Hospital, New York, there was in 1895 a mortality of 10·6 per cent. greater with antitoxin than without in 1894. In the New York Foundling Asylum in 1894 (non-antitoxin year), 24 per cent. : mortality in 1895 (antitoxin year), 45·7 per cent. In the Municipal Hospital, Philadelphia, the mortality with serum was 28·1 per cent. : without serum, 25·9 per cent. The same careful investigator has shown that this species of anomaly may also be found on examination of many Continental returns.

To what is this marvellous reduction in mortality to be attributed? Not, certainly in London, to change in sanitation or hygiene, for happily these are well-nigh perfect in our metropolitan fever hospitals; not to improvement in medical ordinance, for we are expressly told that "no change has taken place during the year in the local treatment of the cases, nor has there been any new factor in the treatment other than the injection of antitoxin"; nor—as I have demonstrated elsewhere, especially in regard to those observed in infant life—was it due to the cases treated with serum being severe ones, whilst those treated without antitoxin were mild. Indeed, it is altogether evident that the improved death rate can only be ascribed to the much greater medical vigilance and nursing care which all cases have received since a spurt has been given to the study of this disease. And whether antitoxin should in the end justify all that is claimed for it by its apostles, or no more than some of us believe to be its due, its introduction must be gratefully hailed by both advocates and detractors on account of the "deepening of the interest" with which treatment of this horrible scourge is now surrounded, and with such happy effect; much in the same way as better results in the general surgery of our present time can only be achieved by those few who still oppose Listerism, on the condition of the strict observance of those laws of cleanliness which are absolutely inseparable from Listerian principles.

One point more. It has been stated that the main factor in the comparative failure which has hitherto attended the serum treatment in this country "is the simple fact of insufficient dosage": but according to figures often repeated, and up till now unimpeached, the mortality in one of the Asylums Board hospitals during the latter part of 1895 was twice as great as that in the earlier,—in other words, in the period when the supposed advantage of much larger doses was accepted and enforced.

But it may be asked, do I deny that there is any benefit whatever to be derived from serum treatment, and are the numerous reports in its favour to be contemptuously ignored as mendacious or untrustworthy? By no means. But I contend that the benefits equally with the dangers are due to the injection of large quantities of albumen, and I am proud to be able to quote Soerensen and Oertel as two of the many authorities of repute who agree with this view. On such an hypothesis it is probable that the serum supplies dynamic force, enabling the patient to withstand the prostration due to the toxæmia, and thus—admitting that the powers of assimilation in children vary—we can understand why large doses are

required by some, and why comparatively small doses produce noxious effects in others.¹

We can likewise appreciate the better results obtained in those cases which are earliest treated, although this is a point which has been insisted on with regard to serum, with a *naïve* oblivion of its application to every treatment of every disease.

We can likewise appreciate that the serum may be beneficial at a date prior to that at which brandy, strychnia, etc., would be indicated, and it is not impossible that an anatomical reason could be given why the larynx, when attacked with diphtheria, is more susceptible to improvement under the serum treatment than the fauces.

This suggestion as to the value of albumen *per se* is strengthened when we remember that antitoxin in which the bulk of albumen has been reduced to a minimum by desiccation, has been found to give less satisfactory results than those obtained by the use of liquid serum.

I would not venture to contradict those who may ascribe these differences of result to a deleterious effect on the antitoxin produced by the desiccating process, for, ignorant as we are of the exact chemical nature of the toxins and antitoxins, no one is in a position to dogmatize on this point: but it may be remarked that the antidiphtherin of Klebs, —a non-albuminous fluid obtained from cultures of the bacillus—has after due trial been abandoned as of no value. We are justified on all these grounds in ignoring the whole question of an antitoxic influence, and especially when we remember that the proportion of cases claimed for benefit under the treatment is considerably greater than those in which the Klebs-Loeffler bacillus is found unmingled with cocci—these last being declared by Loeffler to be not favourably influenced by antitoxin. It is further to be once again noted that in no case have the actual toxic results of diphtheria, such as cardio-respiratory paralysis, nephritis, and neuroses, been in any way diminished—some, indeed, claim that they have been increased—in those patients who survive injections.

In view of all these facts, I venture once more to urge, as Soerensen has done, that at least equal benefit to that obtained by antitoxin might result from the injection of normal saline solutions, or, although that is more hazardous, by the injection of simple sterilized blood serum, as advocated also by Grawitz.

EPITOME.

Summing up the foregoing it would appear:—

1. That objections to the claims for antitoxin do not come from one or two writers, but from authorities in all parts of the world.
2. That the basis of comparison of the new treatment with the old, as adopted by enthusiasts, is unfair.
3. That percentage mortality is also misleading.
4. That the gross mortality from diphtheria in this and other large cities has not decreased.

¹The results of "The Lancet" commission on the relative strengths of diphtheria antitoxin serum, although probably not so intended, are quite in favour of the proposition that the value of the antitoxic serum does not depend on the antidotal element: first, because of the actual and considerable discrepancies between the advertised and the contained number of "immunizing units" in samples obtained from different sources; and, secondly, because while advocating higher strengths of serum units, for example, as recommended by Behring in severe cases—it is stated that as much as 100,000 units may be and often have been used beneficially, and without apparently doing harm. Surely this is a unique therapeutic experience of a remedy claimed to be potent.

5. That to the increased attention given to the subject by the introduction of serum is the improved mortality mainly due, for the death rate of cases treated with serum is out of all proportion greater than that of cases treated without it in the same hospitals.

6. That this is especially true in the case of children attacked under five years of age, the period of life at which diphtheria is admittedly most fatal.

7. That the value of immunizing injections of antitoxin with a view to prevent diphtheria is but slight, and cannot outweigh the dangers of the procedure.

8. That the scientific basis on which the treatment is founded cannot be sustained by any practical test, especially since internal medical and local treatment, as formerly adopted, is still continued.

9. That the benefits equally with the dangers of antitoxin are due to the albumen in the blood serum, and not to any special antidotal element.

10. That the assertion that the comparative failure of antitoxin in this country is due to insufficient dosage is not sustained by the figures now available.

There are many other points that could have been mentioned in this postscript, but most of them have been treated elsewhere. Allusion must, however, be made to the variability of the immunization of the horses, as well as the impossibility of insuring the perfect purity of the horse serum by tests to eliminate the presence of tubercle or of glanders, as if the absence of these taints exhausted all possible sources of impurity.

SOCIETIES' MEETINGS.

BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION.

President—Dr. WM. MILLIGAN, M.D.

PRESIDENT'S ADDRESS.

Gentlemen,—My first duty on taking the chair is to offer to you all my most hearty thanks for the honour you have conferred upon me in selecting me to fill the important post of President of this Association for the coming year.

No one is more fully alive to the fact than I am myself that I cannot possibly fill the post with that distinction and capability which has marked the presidential reign of my distinguished predecessors: but at the same time, while fully conscious of this, it is my firm intention to throw myself with all possible energy into the work which lies before me, and with the co-operation of my friends upon the Council and the aid of our new and esteemed secretaries, to advance in every way possible the interests of this important Association.

Although our Association is a comparatively young one, it has the great merit of being the first established society of its kind in the British Islands; and whilst embracing upon its roll of Fellows many of the most

distinguished laryngologists in the kingdom, it has also the honour to include many well-known confrères in Germany, France, and America.

The gentlemen whom we have just had the honour of electing as Corresponding Fellows will, I feel confident, still further increase the reputation of this Society, and will help to cement those feelings of friendship and *bonhomie* which should bind together in a close and amicable relationship those whose main objects are to endeavour to further the progress of medical knowledge and to ameliorate the condition of suffering humanity. No two objects could be better attained than by meeting here as we do upon common ground, prepared to discuss and dissect each other's opinions, to gain and to impart any special information which we may possess, and to solidify friendships which have been made, but which unfortunately distance and the demands of professional work cruelly interfere with. To my mind, there is nothing more refreshing and mentally invigorating than meeting one's *confrères* for the discussion of questions of diagnosis and of treatment openly and without reserve. Such functions are, I think, admirably served by our quarterly meetings, and prove to many of us an incentive and a stimulus to better work and to higher aspirations.

Gentlemen, what is it which justifies our existence as a body of men striving to grapple with and to overcome the many difficulties which beset the path of him who would attain to eminence in his profession? Is it not that the growth of knowledge, the enormous accumulation of facts, and the never ceasing progress of the age, demand that some of us, at any rate, devote our time and our energies to the prosecution and practice of some special subject or group of subjects? In the acquirement, however, of special knowledge, and in the desire to be recognized as the possessors of the same, there is perhaps a tendency to limit the field of our observations—to narrow our mental horizon. This is an imputation frequently cast at the heads of specialists, but I would fain believe that, in general, at any rate, it is undeserved. To prove that it is so should be our aim and our ambition. No mere hankering after trivial details should be tolerated. A broad and a comprehensive grasp of our subject should be our goal. Let us never forget that the special organs whose habits, whose diseases, and whose life history we are especially interested in are after all but a portion of the human mechanism, a mechanism as wonderful as it is intricate, as beautiful as it is perfect. To steer safely through the many and perplexing questions which daily confront us, we must all—physicians, surgeons, or specialists—train our powers of accurate observation as efficiently as possible. No quality is more requisite in the medical man, no quality is of more importance. At the present time, with our many and our improved methods of diagnosis, our beautiful instruments, and the many aids we derive from chemistry and bacteriology, the tendency is perhaps to trust too much to what, perhaps, I might call a "laboratory diagnosis" rather than a diagnosis made at the bedside from careful and accurate clinical observation.

It has been truly said that "to cultivate the powers of the eye so that "it shall be the entrance gate of the largest possible amount of instruction and delight is one of the great ends of all education." Yet how

many of us disregard this wholesome advice, and how much do not we lose by neglecting it!

In many the powers of observation are certainly developed to a much greater degree than they are in others, but all of us, by careful training, by conscientious effort, can do much to educate and improve the powers we possess. The very fact of the slowness with which the human eye gradually acquires its power shows that nature's plan is that it should be educated. Look at that most charming and wonderful of all beings, the infant in its cradle. Watch how it gazes vacantly and dreamily into space with no perception of size or distance. Watch how, as days and weeks pass by, perception becomes a more definite reality, how the vacant gaze becomes an intelligent glance, how "the eye reflects the soul within."

"But what am I? An infant crying in the night, an infant crying for the light."

Take, again, the practised eye of the mariner—how his keen sight descries the sail upon the distant horizon. Is not this faculty the outcome of training, of long and patient observation? How true are Carlyle's words: "The eye sees what it brings the power to see."

The want of accurate powers of observation is largely attributable to neglect in early training, and nature has her sure revenge, for with her "misuse is as much a sin as abuse." One of the most interesting records we have of what may be done in the way of education by careful and intelligent observation is to be found in Hugh Miller's account of his "Schools and Schoolmasters," where he tells us that the best schools he ever attended were schools which were open to all, and that "the man who keeps his eyes and his mind open will always find "fitting, though it may be hard, schoolmasters to speed him on in "his lifelong education." The schools in which he learned so much were the pebble-strewn shores of Cromarty Firth, where in his boyish rambles his quick eye soon led him to distinguish and to become interested in the various varieties of stones and rocks. This led him to cultivate habits of careful observation, habits which laid the foundation of his future brilliant discoveries as a geologist. He was then but a poor working lad, with but scant opportunities of procuring the advantages of books or what is ordinarily called a good education. As we read the story of his life, however, we cannot but see how it was that those carefully cultivated habits of observation raised him above the ranks of his fellow-workmen, how they educated him in the truest sense of the word, and how they refined and enriched his life.

We see the results of this same keen, careful observation of nature in the case of the artist and the poet. What is it that enables the artist to discover in a landscape innumerable beauties which escape the eye of the ordinary spectator? It is not merely that he has a gifted artistic temperament, but it is that he has by careful study trained his eye to detect those peculiar features which give individuality and character to the scene.

And the same holds good with the poet. Think of Wordsworth, pre-eminently the poet of nature. It was his wonderful keenness and faithfulness of eye, trained by years of earnest study, which enabled him to see what remained hidden to the careless observer; and who in reading

Tennyson has not marvelled at his wonderful delineations of nature, and felt how no mere poetic taste, but only patient, close, and loving observation of nature, could have enabled him to portray her as he has done? Take his description of the appearance of an ash tree in the early spring, when he says, "*Black* as ash buds in the month of March." It needed a careful observer to speak of them thus, and yet how exactly true the description is. Or, again, when he tells of the lone heron who "lets down his other leg, and, stretching, dreams of goodly supper in the distant pool." Or when in "*Locksley Hall*" he describes with such faithful exactness how—

"In the spring a fuller crimson comes upon the robin's breast;
In the spring the wanton lapwing gets himself another crest."

And again—

"In the spring a livelier iris changes on the burnished dove."

Surely these vivid descriptions are due not merely to poetic intuition, but also to carefully educated habits of observation.

As Prof. G. Wilson has truly said, "All come infinitely short of what they should achieve were they to make their senses what they might be made. The old have outlived their opportunity . . . but the young can so cultivate their senses as to make the narrow ring which, for the old and infirm, encircles things sensible, widen for them into an almost limitless horizon."

The special departments of professional work which we have selected as our life's work are admirably adapted to call forth those qualities of observation of which I have spoken at some length.

Keen observation coupled with an accurate and comprehensive knowledge of our subject are, I take it, the main qualities requisite for success. Let us spare no pains to keep pace with the progress of our speciality, and let it be our ambition to add some fact to the sum total of human knowledge—some fact which may be useful, which may teem with wisdom, which, long after we have left this mortal coil, may redound to our credit, and to the credit of our profession.

"Knowledge comes but wisdom lingers, and I linger on the shore;
And the individual withers, and the world is more and more."

The vitality of our Association, the value of the work which has been, and which is still being, done are facts which cannot be gainsaid. The most cursory glance at our published "*Transactions*" should, I think, convince even the most sceptical that this is so. Last summer's work alone is a proof of this, and I think that any association might and should be proud of the published records of the summer meeting of 1895. The many important subjects then discussed, the intrinsic worth of the contributions, and the value of the advice then offered, will, I feel confident, stand out as bright landmarks in the history of this Society.

The departments of laryngology and rhinology have assumed an importance which must be most gratifying to those who in the first instance guided their progress along the thorny paths of opposition and of prejudice.

How much easier is it for us now to tread those paths made comparatively smooth by the labours of our predecessors!

But our duty is to advance, to penetrate into new territory, to add discovery to discovery, conquest to conquest. Are we not constantly

besieged by a host of unseen foes, foes who come up to the very portals of our citadel, and would fain gain an entrance but for the vigilance of our sentinels?

Gentlemen, our duty is to tend those sentinels—to keep the great army of leucocytes in such a state of efficiency that, even if the threshold of our fortress is passed, advance is rendered well-nigh impossible by the devouring powers of our white-robed protectors. That most charming romance of modern pathology, Metchnikoff's theory of phagocytosis, opens up for us a new vista of thought, of observation, and of labour.

The necessity of maintaining the mucous membrane of the fauces, pharynx, and naso-pharynx in a healthy state must now be admitted by all to be a matter of the very first importance. Recent researches have shown that large numbers of phagocytes pass from the normal adenoid tissue—so abundant in this region—into the cavity of the pharynx along with mucus from the surrounding mucous glands. It is, I think, also fairly well admitted that these phagocytes play an important rôle in devouring micro-organisms introduced along with food and air, and thus that they exercise the important function of protective agents. The numerous lymphatic tracts, with their manifold ramifications so freely distributed in the submucous tissues of this region, become readily affected by disease should these phagocytes fail in their duty, or should breaches of continuity occur in the mucosa. When thus affected systemic involvement readily takes place, and often with most serious results.

Chauveau and Sims Woodhead have shown with what frequency the cervical lymphatic glands become affected by tubercle bacilli which have gained an entrance by way of the tonsils. Dieulafoy has also shown that a certain number of cases of enlarged tonsils and of naso-pharyngeal adenoids are in reality tubercular in nature. In some the action of the phagocytes is sufficient to prevent the farther inroad of the bacillus, but in others it gains an entrance through these portals, attacks the lymphatic glands, and from the lymphatics connected with these glands finally reaches the general circulation, and so the lungs.

Semon has also demonstrated that the micro-organisms of various septic states of the pharyngeal mucosa gain admittance into the general circulation through these same portals. How important must it not then be to maintain the mucosa in a state of efficiency!

While not for one moment wishing to discredit the value of general treatment and of general precautions, I maintain that the systematic and thorough treatment of any lesion in this neighbourhood, which, in the first instance, at any rate, is local, should never be neglected. Too often this local treatment is neglected, and valuable time is thus allowed to slip by—time when in all human probability most good can be done for the patient. I need only instance the value of the early local treatment of tubercular or malignant ulcers before the lymphatic plexuses and glands have become hopelessly involved.

Besides laying stress upon the value of local treatment I would again urge the importance of the minute observation of local departures from what we have been educated to regard as the normal condition of parts. All of us have probably frequently observed that peculiar anæmic condition of the laryngeal mucosa, the precursor of laryngeal phthisis, and

the early fixation of a vocal cord, the forerunner of malignant disease of the part.

Such early indications of disease are naturally of the utmost importance, and the more keenly we train our powers of observation to detect such early changes and to estimate correctly their value the better will it be for our patients and for ourselves.

In our age, practical if it is nothing else, and in our time, when competition is brisk and the struggle for existence is keen, we are, perhaps, as a nation too apt to be satisfied with devoting our thoughts and energies to the attainment of things tangible often at the expense of scientific progress. And, yet, is not the maintenance of the health of the people one of the great, if not one of the greatest, bulwarks of national prosperity? I can imagine nothing of more value and of greater practical import to the nation than the encouragement of scientific research by a generous and open-handed Government, the making it worth the while of the young and enthusiastic scientist to devote his time and his brains to the elucidation of the many intricate problems which surround the health of the people. Were more facilities afforded, more encouragement given, and better remuneration offered for such work, we should as a nation soon attain that pre-eminence in science which we already hold in our naval, commercial, and diplomatic relations. And would the funds required for such a purpose and expended upon the furtherance of scientific research be missed for one moment from the pocket of this great and prosperous nation?

The difficulties which surround the differentiation of many throat lesions from one another in their early and consequently important stages, and the disastrous consequences which so frequently attend their non-recognition, are in themselves powerful arguments in favour of encouraging local authorities to provide in each great centre some laboratory accommodation with skilled attendance, where medical men can procure the assistance afforded by recent advances in bacteriological research. How many epidemics of diphtheria, for instance, are not directly due to children attending school and mixing indiscriminately with their companions while suffering from some form of membranous sore throat? How much more easily could the disease be recognized and stamped out were such facilities afforded by the proper authorities.

I am happy to think that already in some centres this desideratum has been supplied, but I would fain see the system universal. The strides which science has made, and the practical issues which have resulted, should, in my opinion, be recognized by the State's affording better opportunities for scientific research.

Gentlemen, I feel that I cannot conclude this address without saying a few words upon the recent addition of otology to the work of this Association, an addition which I confidently hope may prove to be a move in the right direction, and may be the means of bringing within our midst many workers in this highly interesting and important department.

It is somewhat strange that while our Continental and American confrères have had Otological Societies in full work and vigour for many years past, we in this country, until the inclusion of this subject under the mantle of this Association, have had no special society for the discussion of

problems of otological interest. It is not my intention to weary you with a detailed history of the progress of otology from the time of Hippocrates and Celsus down to the present day, but I would make bold to say that the advances made in otology during the last few years bear favourable comparison with advances made in other departments of medicine and surgery. No real advances are made by leaps and bounds. Genuine progress is only attained after the expenditure of much labour and the burning of much midnight oil.

"Science moves but slowly, slowly creeping on from point to point."

Otology, perhaps, more than any other medical or surgical subject, has had much to contend against. The unfortunate sufferer from deafness, from whatever cause, has been, and still is too apt to be, voted a nuisance and a bore, and one upon whom it is useless to expend one's pity.

What a different degree of sympathy does not the blind man receive from his fellow creatures! And can anyone truly say that the loss of the sense of hearing is not just as great a burden to bear as is the loss of sight? Charlatanism and quackery, which have done so much to discredit the practice of aural surgery, are, I trust, being fast annihilated, and their places taken by knowledge and scientific truth. The time has long since passed when diseases of the ear, from whatever cause arising, are to be treated by drops, by stimulating applications, and by the insertion of wool in the external auditory meatus, or, to speak more correctly, by the insertion of a small pledget of black wool from the left forefoot of a six-years-old black ram!

The dawn—I might truly say the mid-day—has fully burst upon the otologist, and I look hopefully for a fruitful eventide. Emancipated from superstition, from quackery, and from prejudice, the aural surgeon of to-day turns to his subject conscious that he must work upon true scientific lines—that he must bring to bear upon his work those established principles of medicine and of surgery which, while applicable to diseases of other organs, are equally applicable to diseases of the ear. Is not the ear but a part of the whole economy? Why, then, should it not be amenable when diseased to the same principles which guide us in the treatment of diseases of other organs? Gentlemen, I look forward to the future of otology with hopefulness. I see in it a department which has not received its full share of interest and study, but a department which is daily receiving more and more attention, and which will, I trust, in the future take the position its importance demands. I would venture to urge the necessity of studying more minutely those pathological problems which surround and enshroud many diseases of the ear. Without a true appreciation of pathology how can we hope for or expect to see improvement and progress in our methods of treatment. Take, for instance, that terribly frequent and oftentimes hopeless disease of the middle ear, progressive sclerosis of the tympanic mucosa. Is it a catarrhal process in the true sense of the word? is it due to some tropho-neurosis? or what is it? Here, indeed, is a field for work, for research, and for discovery. Would not the man who could unfold this tale and show us how to cure the disease, or, at any rate, to effectually stay its progress, be a benefactor to his race?

How frequently are we not consulted by patients suffering from that most troublesome symptom "tinnitus," and how frequently do we not prescribe for such patients without having in our minds any real or definite idea of what this symptom is due to, of what the pathological basis of its existence really is?

Then, again, have we a minute and accurate knowledge of diseases of the internal ear? Are not several of our methods of diagnosis of labyrinthine lesions somewhat empirical? Do we not frequently treat supposed diseases of the auditory nerve, either central or terminal, with but scanty knowledge of where the lesion exists. The illustrious Toynbee set us a good example in this respect, but few, I fear, who have followed him have worked upon the pathology of ear diseases with the vigour with which he did.

You may say that pathological material is hard to obtain, and that even when secured it is from the very nature of its surroundings difficult to manipulate; but it can be got, and many intricate problems might be unravelled were its study systematically pursued.

Careful analysis of cases, careful clinical records, and, wherever possible, careful *post-mortem* notes, will not only add to the interest of our daily work, but may be the foundation of important generalizations later on.

Upon what lines, then, are we to look for progress? I venture to say that one of the very first essentials is that succeeding generations of medical students should be systematically taught and examined upon the elements of aural surgery. Everyone in this room will, I think, corroborate me when I say that the number of acute cases seen in practice—in hospital practice, of course, more especially—is infinitesimal as compared with the number of chronic cases seen. How many paracenteses, for instance, does any single aural surgeon perform in a year for acute suppurative inflammation of the middle ear with intact membrane? Do not the patients as a general rule come to the clinics after days of acute suffering and when nature has relieved the existing tension by spontaneous rupture of the membrane, sometimes small, sometimes large—often, too, at the expense of the organ as an organ of special sense, sometimes even at the expense of the patient's life? And yet how satisfactory are such cases when seen early; how readily they recover if properly and rationally treated, and with what wonderful success so far as regards the preservation of the special function of the organ. Again, how many of us are consulted by patients the victims in adult life or in middle age of the effects of the presence of adenoid vegetations as children: consulted at a time, too, when cure of existing ear trouble is often wholly out of the question, and where it may be difficult even to arrest the progressive character of the disease? The whole history of the relation of nasopharyngeal diseases to diseases of the middle ear is an excellent example of the results of accurate observation and of inductive reasoning. To Wilhelm Meyer the profession are indebted for the clear and lucid manner in which this important relationship was first prominently brought before the profession. The masterly way in which his exposition was made, the great practical value of the discovery, and of the

means devised to treat it, are too well known and too well appreciated to require any reiteration before an audience such as this.

To-day we mourn his loss—the loss of a great man and true—but his memory will ever be cherished as one of the great benefactors of mankind. How many men of to-day owe the integrity of their organs of hearing to the genius of Wilhelm Meyer it would be impossible to say, but the number must be legion. A grateful profession, and I trust a sprinkling of a grateful public, has subscribed to perpetuate his memory by the erection of a statue in his native town of Copenhagen—a just and a pleasing tribute to the memory of a man we honour and revere.

To remedy such a state of affairs—this want of recognition of disease in its earliest stages—we must educate the medical student to observe, and to observe intelligently. Far be it from me to wish to add another burden to the many burdens the student of to-day has to bear, but what I would rejoice to see would be the transference of biological and chemical work from the purely college life of the student to the last year or couple of years of his school life. The great demands made upon the student of to-day, the enormous amount of purely medical and surgical knowledge he has to master, are to my mind amply sufficient to fully occupy the whole time of his five years' course. At present there is no denying the fact that many students pass from our universities and our hospitals without ever having seen a normal or a diseased membrana tympani. Under such circumstances how can we expect such men, students of to-day, doctors of to-morrow, to recognize the incipient stages of disease in a special organ? Surely it is to this early recognition of disease, and to its prompt and rational treatment, that we must look as one of the first and foremost means of advancing our subject.

The development of surgery and the discoveries of bacteriology have done much to assist the aural surgeon, and to the many workers in these departments we owe a deep debt of gratitude.

The importance of suppurative affections of the middle ear, and the grave results which so frequently follow the neglect of the same, is gradually dawning upon the profession, and I might say upon the public also. The day has not yet passed, however, when we hear such advice given as "Let the ear alone; the patient as he grows older will grow out of his deafness"; or the advice that "it is not safe to stop a running ear."

One can imagine the various streptococci and staphylococci rejoicing in such advice, and saying to each other that at any rate their day of reckoning has not yet arrived. But that it shall arrive, and that speedily, is practically certain. Gentlemen, I think that the aural surgeon is to blame in this respect. Too long has he delayed, and too long does he still delay, in adopting those general principles of surgery which apply to suppurative affections in other parts of the body. What is the result? Gradual and maybe painless erosion of the surrounding bony parts, infective thrombosis of venules and lymphatic radicles, and finally deep-seated intracranial suppuration, general or localized. Conservative treatment may be right, and may be justifiable under certain circumstances; but in a very large proportion of cases I hold that it is wrong, and that

more radical interference is demanded, based upon the knowledge that we have in the recesses of the middle ear and mastoid antrum (the very ideals of a good incubator), swarms of unseen but deadly foes, foes ready to spring upon and devour us.

The terrible havoc and the permanent damage so frequently done to the ear during or subsequent to attacks of exanthemata, scarlet fever, measles, etc., are unfortunately matters of everyday observation. Hardly a day passes but some patient is brought to our consulting-room or to our hospital clinic with perforated drum, foetid discharge, presence of granulation tissue, or deep-seated caries, with injured hearing and with blighted hopes, and with the same well-worn tale: "Doctor, this came on as the result of scarlet fever." Now, gentlemen, should such a state of affairs exist towards the end of this the nineteenth century? Are these post-scarlatinal cases of such virulence that all this damage should so frequently be observed as a sequel? Do our private cases, when we are fortunate enough to be called in during the early stages of the disease, behave in this way? I am sure that everyone here present will say that they do not. I will make bold and say that in general such results are the outcome of the non-recognition of the inflammatory process at its commencement, and to imperfect treatment when once the disease has declared itself. The resident medical officer or officers in our great fever hospitals are so taken up with the gravity of the disease and the danger to life of the many fever-stricken patients under their charge, that one cannot expect them to give that amount of detailed attention which is requisite when any special organ is seriously involved, even had they the requisite knowledge and manipulative skill. But the damage done is of such a far-reaching nature and of such immense moment to the patient, that I would fain see a movement set on foot and successfully carried into practice—a movement to appoint to each large fever hospital a competent aural surgeon, whose duty it should be to examine all patients whenever a suspicion of ear trouble exists, and whose duty it should be to seek to stem the tide of the advancing inflammatory process.

How much deaf-mutism might thus be prevented, how many lives might in this way be rendered happier by the retention of the powers of hearing, it is of course impossible to say: but that great good would accrue and much suffering and unhappiness be thus obviated, is, to my mind, quite certain.

Bacteriology with its enormous advances has put an entirely new complexion upon the duty we owe to our patients the victims of suppurative middle-ear disease. Much, no doubt, yet remains to be done. Doubtless certain organisms possess more virulent properties than others, and if proved to be present in excess in the secretions radical treatment may be at once demanded. A time may come when it may be possible to classify suppurative diseases of the middle ear according to the predominating organism, and when definite laws may be laid down as to the precise method of treatment to be adopted: whether, with certain organisms predominating, conservative remedies may be justifiable or whether radical measures are imperative.

Here also is a field for observation and research. Then, again, do we

fully recognize what the toxic effects of the products of these organisms may be upon the system in general? Who has not been struck with the anæmic or chlorotic appearance of many patients the victims of suppurative middle-ear disease? May not the diseased middle ear, the factory in which micro-organismal life with all its toxic properties and effects is elaborated with unceasing energy, be responsible for many of these blood changes? May not the great army of leucocytes be gradually overpowered by constant warfare with these unseen foes? Much, I believe, remains to be done in the study of the life history of these organisms, and more especially in the study of their bye-products and their chemico-pathological effects.

Gentlemen, time does not permit of my elaborating or speculating any farther upon possible lines for future work, but that otology has a great and useful future before it I confidently believe; and I am sure I echo the sentiments of everyone here present when I say that if this Association is the means of advancing the knowledge of those subjects the welfare of which we have at heart, we shall at any rate have the satisfaction of knowing that our labour has not been in vain.

"Who loves not knowledge? Who shall rail
Against her beauty? May she mix
With men and prosper! Who shall
Fix her pillars? Let her work prevail."

**SOCIÉTÉ DE LARYNGOLOGIE, D'OTOLOGIE, ET DE
RHINOLOGIE DE PARIS.**

July 10th, 1896. ("Arch. Internat. Laryng.," July and Aug., 1896.)

President—M. LUC.

M. COLIN. *Treatment of Leptothrix Mycosis by Perchloride of Iron.*

Under this title the author recounts a case which had resisted all ordinary treatment, and which was cured by swabbing with perchloride of iron solution.

Modification of Stacke's Operation.

M. GELLÉ describes a new method of resecting the postero-superior wall of the meatus. His object is to avoid the chance of wounding the facial nerve and the horizontal semicircular canal. To this end, after opening in the usual manner the mastoid cells and the infundibulum of the antrum, he relinquishes the chisel and mallet, and makes use of a small chain saw to cut away the remaining bridge of bone. The links of this chain are short, and the instrument passes with ease from the antrum into the open tympanum, guided by a wire previously introduced. Two chain cuts are made, one from above downwards, directed towards the apex of the apophysis; a second horizontal. By this means all cutting of the deep parts is made from within outwards, and takes place external to and below the important structures mentioned. After removal

of the angular fragment of bone an excellent view is obtained for subsequent curettage and swabbing. The author has not yet made use of his instrument except on the cadaver.

M. LUC congratulated the author on this ingenious method, and both he and M. MARTIN spoke of the danger attending the use of the curette.

M. HELMÉ spoke in the same terms of the curette, and commended the dental engine.

M. LUC, although he had used burrs and trephines, preferred to confine himself to the gouge and mallet.

Dermatosis of the Face and Disease of the Nasal Fossæ.

M. P. LACROIX recorded three observations in which treatment of various obstructions of the nose had produced, without other treatment, distinct and even striking improvement in disease of the neighbouring skin.

M. LUC considered that it was always desirable to make a careful examination of the nasal fossæ when skin disease was present in the neighbourhood of the nares.

M. HELMÉ had seen the external surface of the nose redden after cauterization for nasal obstruction.

A Fresh Case of Mastoiditis of Bezold.

M. LUC reported another observation of this accident, in which operation was followed by cure. The author remarked that it was interesting to find that during the last six months, since the publication of his memoir in the "Archives," the number of recorded cases had considerably increased.

M. GELLÉ asked if there was any indication in the pharynx.

M. LUC replied that there was none.

M. WEISSMANN asked what was the thickness of the capsule.

M. LUC replied that it was very thin: one or two millimètres at most.

A Case of so-called Mastoiditis of Bezold.

M. LICHTWITZ sent in a memoir on this subject, which will be published subsequently. *Ernest Waggett (Trans. and Abst.).*

BELGIAN SOCIETY OF OTOLGY AND LARYNGOLOGY.

Meeting, June 7th, 1896. (Continued from page 215.)

President—Dr. DELIE.

M. CAPART. Pathology and Treatment of Ozena.

Ozena is characterized by an atrophy of the nasal mucosa, specially marked in the inferior turbinated, which is reduced to an almost imperceptible ridge, generally accompanied by a hypertrophy of the middle turbinated, and by thick adherent crusts with a distinct, characteristic smell. There is no ulceration, no necrosis. Thus syphilis, tuberculosis,

sinusitis, and foreign bodies are excluded. The lesion may extend to the pharynx, larynx, and even to the trachea.

The pathology of *ozæna* is very obscure, and I do not presume to be able to settle it now, but will pass in review and criticize the different theories which from time to time have been brought forward.

First, is there a congenital alteration in the shape of the facial bones at the root of the disease? Zaufal maintains that, on account of the atrophy of the inferior turbinateds, the ventilation of the nose is bad, the secretions stagnate, dry up, and decompose; hence the smell.

Hopman asserts that in every case the distance from the anterior nasal spine to the posterior border of the vomer is too short, while the height of the nasal cavities is too great. Therefore, whenever the depth of the septum and pharynx is seventy-seven millimètres (the normal) or more, *ozæna* may be excluded; whereas, when the figure is under seventy millimètres, there can be no doubt about the *ozæna*, provided always there are no traces of syphilis.

This seems to me to be going rather too far. Why do these authors not insist on finding similar malformations of pharynx, larynx, or trachea? *Ozæna* develops at all ages, consequently at all stages of development of the facial skeleton. Simple atrophy may exist in very wide noses, and *ozæna* in narrow ones.

Berliner attributes *ozæna* to the hypertrophy of the middle turbinated, which brings it into close contact with the septum. This I have sought for in vain in most of my cases.

Equally incorrect is the theory of Michael and (more recently) of Grünwald, that sinus inflammations may be the cause. Doubtless a sinusitis may complicate the disease; but such a condition must be rare. I have never seen it. It must be remembered that *ozæna* is chiefly a disease of childhood, when the accessory cavities are still rudimentary, whereas, in the aged, *ozæna* tends to disappear, whilst the cavities reach their highest development. The pus from a sinusitis has a characteristic smell, but it is rather that of dental caries than of true *ozæna*.

Löwenberg's (and Massei's) *cocco-bacillus* theory is not convincing—one must always guard against mistaking the effect for the cause: inoculation experiments have, so far, been far from conclusive. None of these theories, then, is satisfactory. On one point all, or nearly all, authors are agreed, viz.: that the substratum or basis of the disease is an atrophic inflammation, a sclerosis of the mucosa. Is this the result of a precedent hypertrophic catarrh, or is it atrophic from the beginning? This is a difficult question to answer, but I incline to the latter view because I have not infrequently seen *ozæna* appear a few days after birth. In any case there is no doubt about the atrophy. Let us now go further, and consider the teachings of microscopic anatomy; and since the disease may coexist in the pharynx and larynx, let us seek for its source in tissue common to all parts. The epithelium becomes paved and even cornified, the glands of Bowman and the acini have generally undergone degeneration and fatty infiltration. Similarly the submucous cellular tissue is degenerate, and is infiltrated with pigment-containing cells, causing the slate-grey colour so familiar in the inferior

turbinated and the septum. Thus the affection is principally of the organs of secretion. Hence it comes that *ozæna* tends to disappear with old age, when the glands naturally undergo atrophy. Further, Gottstein, Jurasz, and others have drawn attention to an important symptom. One often sees numbers of little greyish brown points on the inferior turbinated, the septum, and the lateral wall of the nose. These are little concretions at the orifices of the glands. They gradually increase in size, one meets and fuses with its neighbours, and thus forms a crust, which dries up and decomposes in the air. Walb says that the pressure they (the crusts) exert may be such as to determine the atrophy of the inferior turbinated.

What, then, is the cause of this atrophic inflammation? Shall we ascribe it (with Zarniko and Rethi) to a trophoneurosis, or shall we not rather ascribe it to a general disturbance of nutrition depending on "scrofula"?

One point more. Is *ozæna* infectious? Opinions vary, and justifiably; and the only way to arrive at any definite conclusion is by each one of us bringing forward exact and carefully studied statistics of our cases, as was done by our German confrères in regard to cancer of the larynx and diphtheria.

Treatment.—The heroic measures recommended by Rouge, Bardenheuer, and Volkman are not necessary. The nose must be kept clean, and, if possible, aseptic, by frequent injections of sterilized water containing potass. chlorate, sodæ bicarb., or Grünwald's alkaline wash, viz.: sod. chlorate, sod. bicarb., sod. baborate, āā, a tablespoonful in a litre of hot water (28-32° C.), or else weak solutions of sod. chlorid., carbolic acid, or potass. permang. By the use of these one obtains lasting cures; the symptoms disappear, the mucous membrane undergoes anatomical changes (revealed by the microscope), and the inferior turbinated often returns to its normal size, etc.

If simple washing is insufficient to remove the crusts, then use Gottstein's tampons.

Vibratory massage, by hand or by electro-motor, has proved disappointing. Cauterization with solid nitrate of silver, with trichloroacetic or chromic acid, sometimes acts well; so also does pyoktanin alone or, with vaseline. Walb and Rethi advise deep cauterization with galvanocautery, specially wherever the atrophy appears most marked, their aim being to destroy any glands that still persist. But none of these methods can compare with electrolysis (*vide* the publication by my assistant, Dr. Cheval), specially bipolar. It is no exaggeration to say that one ought to cure 90 per cent. of all *ozænas*, and that often one sitting is sufficient. With a current of 20 milliamperes, twenty minutes is long enough for a sitting. If the patient cannot stand the bipolar method, use the unipolar, with the negative pole on the arm, thigh, etc. If necessary, specially in children, I do not hesitate to administer chloroform: and I have never seen the slightest accident, although I have used this treatment more than three hundred times.

Lastly, let me repeat that my clinic is open to all my confrères, and I am ready to prove the truth of my statements on the worst case of *ozæna* they can bring to me.

M. DELSAUX. *Ozæna* means stink—therefore indicates not a disease but only a symptom. A much better name is *rhinitis chronica atrophical*.

Zaufal and Hartmann consider the cause of *ozæna* to be too large nasal fossæ, whereby the evacuation of secretions by the respiratory current, or by blowing the nose, is hindered so that they accumulate and decompose.

Michael thinks that the starting point is an ethmoidal or frontal sinusitis; but, as Lermoyez points out, pus running over a healthy mucous membrane excites swelling rather than atrophy.

Gottstein's theory is more reasonable: atrophic catarrh of the mucous membrane, which, spreading to the turbinateds, causes them to disappear. The word "catarrh" should be dropped, and replaced by *rhinitis atrophica* or *sclerosis*.

Grünwald is of opinion that the atrophy found by histologists is the result of the action of the crusts on the mucous membrane, but is not the cause of the affection. The cause is to be traced to circumscribed centres of suppuration whose secretion has been suppressed by local treatment; sometimes to empyema of the frontal, ethmoidal, or sphenoidal sinus; or to the presence of adenoid vegetations, in the recesses of which the secretions are retained and dry up. According to him the exudation is always liquid at first, and becomes dry—(1) because it is mechanically prevented from flowing away; (2) because the current of air is insufficient to expel it. Compare the opinion of Zaufal and Michael. Tissier maintains the constant presence of a lesion in the bone of what he calls the ethmoidal system; hence the necessity for curettage in treatment.

Mayo Collier attributes *ozæna* to the existence of an ethmoiditis.

Marsh gives four pathogenic causes: (1) Diathesis; (2) microbic infection; (3) vaso-motor changes; (4) ethmoidal necrosis.

Bresgen has found in all his recent cases a centre of suppuration in at least one of the accessory cavities of the nose, most frequently the sphenoidal.

Examining microscopically, Wingrave has found the following changes (confirmed by Habermann):—

1. Transformation of the ciliated epithelial cells and of the olfactory cells into stratified squamous epithelium.
2. Disappearance of the hyaloid basement membrane.
3. Changes in the glands, from a swelling of the secretory cells up to complete disorganization: the epithelium of the gland ducts resists longer.
4. Changes in the vessels; obliteration of capillaries; diminution and atrophy of the cavernous spaces.
5. The atrophy of the bone is the result of a passive process. The lymphoid tissue in the neighbourhood frequently disappears.

Löwenberg has proved the constant presence of a highly pathogenic *cocco-bacillus*: large bacilli in short chains or in masses, generally appearing as diplococci, staining well with gentian violet and other aniline dyes. It is distinguished from other cocci by its larger size—1 to 1.65 μ . Cornil has verified these results.

Wingrave's theory is most in accordance with our ideas of a chronic

atrophic rhinitis. That a chronic simple catarrh is the precursor of atrophic rhinitis is most probable; but I cannot admit that a hypertrophy always precedes the atrophy.

The presence of Löwenberg's bacillus cannot be denied; but as all inoculation experiments have failed, it cannot be regarded as *the* cause of the disease. Two great factors must be kept in mind: (1) the predisposition of the lymphatic or even the scrofulous temperament; (2) heredity. True ozæna can affect a robust, apparently healthy, individual; but there are exceptions to all rules.

Ozæna, then, is chronic atrophic rhinitis, with fœtor due to the cocco-bacillus of Löwenberg.

Treatment must be of long duration. Lermoyez even declares that ozæna is, up till now, incurable. First, the crusts must be removed by copious and repeated douchings of the nose; then they must be prevented from re-forming by continuing the douching during months or years. The douches should be alkaline, antiseptic, etc., and varied frequently. If the parts dry up very rapidly, then apply vaseline with some antiseptic. All so-called curative agents are ultimately irritants; all increase the blood stream in the parts, and so produce an increased and healthier secretion, etc. The treatment by antidiphtheritic serum tried by Belfanti and Della Vedova has not yet been sufficiently widely tested to justify any conclusion as to its value.

General treatment should be tonic: open air, seaside air.

Prophylaxis must consist in cutting short chronic coryzas, and in teaching children and adults to blow their noses properly.

M. EEMAN wished to ask MM. Cheval and Capart whether, after their electrolytic treatment, the patient left off all washing of the nose. Until he had seen some patients treated by electrolysis some months or a year ago, who since then had used no washes, douches, etc., and who still remained free from the characteristic odour, he should refuse to believe in the efficacy of the treatment, and attribute the whole effect to the douche.

M. CAPART. The cure is manifested by the falling away of the crusts, by the return of the mucosa to its normal aspect, sometimes even by a reconstitution of the previously atrophied turbinated. I have nothing to change in what I said last year: but I recognize now that the pharyngeal mucosa does not benefit by the intranasal treatment.

The improvement cannot be due to douching, which M. Cheval no longer requires his patients to carry out.

M. BAYER found that six or seven milliamperes was as much as his patients could endure, and even this caused very severe pain in the ear of the same side.

One of his patients, a few days after electrolysis, developed a hæmorrhagic otitis media, then a meningitis, and died. This and other cases showed the electrolytic treatment to be dangerous. On the other hand its success in many cases was striking: the odour and the crusts disappeared, and the mucosa became "succulent." He always used douches. He had seen good results in the naso-pharynx from the intranasal treatment. These were necessarily due to some reflex action.

and encouraged one in the hope that laryngeal cases might react in the same way.

In conclusion, he considered electrolysis the best treatment for ozæna, but it was not free from danger.

M. CAPART had never had a single accident, and could only suppose that M. Bayer's misfortunes had been due to faults in technique. Certainly his galvanometer must be wrong, because six or seven milliampères—and, indeed, far larger doses—ought to be borne with the greatest ease.

M. BLONDIAN considered true ozæna incurable. His treatment consisted in douches and vibratory massage. Electrolysis was effective, but he would like to know if the so-called cures were permanent.

M. GORIS had used electrolysis in eight cases: only one showed marked improvement.

M. SCHIFFERS doubted the efficacy of electrolysis: its action should be to reduce still further tissues already reduced too much. Ozæna in young girls about the age of puberty was the most easily cured; but ozæna in men, with considerable malformation of the nose, was a different matter. Do what one might, it remained incurable.

M. GOUQUENHEIM thought that the etiology of ozæna was variable: therefore, some cases could be cured, others could not. He asked M. Capart what sort of cases he cured.

M. DELSAUX had seen only temporary improvement from electrolysis. He pointed out to M. Schiffers that the - pole copper, which is the only one introduced into the diseased tissue, had not a destructive but merely an irritant action. He used twelve to fifteen milliampères with no bad results.

M. JACQUET was sure that M. Bayer's rheostat or galvanometer was out of order: a current of seven milliampères produced no intolerance.

M. WAGNIER recommended massage.

M. BOLAND proposed the appointment of a special commission to inquire into the question of electrolytic treatment.

The PRESIDENT promised this should be done.

M. ROUSSEAU had done some forty electrolyses without a single accident. In the middle turbinated the needle should be driven in from below upwards, then turned and driven from before backwards. If this were done accidents were impossible. The quantity as well as the intensity of current should be taken into account: for example, a current of five milliampères used for thirty minutes gave a greater quantity of electricity than one of ten milliampères used for ten minutes.

M. BLONDIAN. *Reflexes due to certain Pathological Conditions in the Nose.*

M. G. suffered from a constant discomfort in the throat, an irritation producing cough, sometimes in fits, but never accompanied by expectoration.

Pharynx and larynx I found normal, but there was nasal and nasopharyngeal catarrh, and a large septal spur in the right fossa, producing complete occlusion of that side. The patient admitted that he had had syphilis some years earlier. The question, therefore, arose whether the throat condition was due to the syphilis, or was it a reflex neurosis. Three

weeks' antisyphilitic treatment having produced no improvement. I removed the spur by Bosworth's method. Immediately thereafter the irritation in the throat and the cough ceased, and remained absent for two days. They then returned, but in a modified degree, gradually grew less, and finally disappeared shortly after the removal of my last dressing. No other treatment was employed, and the patient, who drank pretty freely, did not even change his mode of life. The first disappearance of the cough, etc., immediately after the operation, was probably due to the action of the cocaine used.

How are we to explain this relation between throat and nose? F. Frank has shown that excitation produced by a spur pressing on the lateral walls, and causing a passive hyperæmia there, is propagated by the ophthalmic nerve of Willis—nasal nerve—to the centres, whence it is reflected along the great sympathetic. The action of the vagus (centrifugal) must also be taken into account in our case, as must also the fact that the nerves of an alcoholic are likely to be hyperæsthetic; and, lastly, that a certain amount of the disease may have been due to his syphilis.

Another case was that of a man, aged 47, with nasal polypi, who came to me complaining of respiratory trouble, accesses of spasmodic dyspnœa, generally worst on going to bed; also of neuralgia and of watering of the eyes. I removed the polypi, and by that alone nearly cured all the symptoms. They did not completely disappear, however, till I had scraped away all the pedicles of the polypi. No other treatment was given.

Another case was sent me by a colleague who had tried all the drugs ordinarily used in such cases.

R. complained of being no longer fit for his work owing to difficulty of breathing. His attacks were often preceded by sneezing fits, came on during the day, and often lasted some hours. The condition of heart, of kidneys, of larynx could not be held responsible for these fits, but the inferior turbinals were hypertrophied, the posterior ends being immense. I reduced these, and the patient has not suffered since (six months), but has been able to carry on his old work.

These two cases of spasmodic dyspnœa are to be regarded as reflex neuroses, arising from irritation in the nose. That they were not due to nasal obstruction, causing secondary inflammation or irritation of lower parts of the respiratory tract, is proved by the facts:—

1. That removal of the polypi in the one did not cure the dyspnœa, but that scraping away the pedicles did; and
2. That in the other patient the hypertrophy did not cause complete nasal obstruction.

We are therefore justified in concluding that a foreign body (in the narrow sense of the term), or a similar condition due to a pathological state of the nasal fossæ, is capable of producing the above described respiratory troubles, which are true reflex neuroses. Other causes may produce them, but with these we need not at present trouble ourselves. I do not wish to rush to extremes in my conclusions, but I think that we must insist on affections of the nasal fossæ being considered important factors in the etiology of spasmodic affections of the larynx and lungs.

M. BLONDIAU. *Observations on Transfixions of the Turbinals.*

Definition.—Transfixion of the inferior turbinal consists in passing a galvano-cautery along the turbinal between the mucosa and the bone. Disorganization of the tissues is produced, and there results a notable diminution in volume of the turbinal.

Cases in which it should be employed.—The most suitable cases are those of chronic coryza, especially where there is hyperplasia—*i.e.*, where the increase in size is due to production of new elements.

On the other hand, cases of hypertrophy, properly so called *i.e.*, where one finds an increase in the size of the anatomical elements themselves, are often successfully treated by irrigation, application of astringents, and by massage; caustic treatment not being always necessary.

Indications.—The mucosa of the free border of the inferior turbinal is very thick, especially when it is turgescient. This, therefore, is the point of election for our operation. As to the length of the cauterization, it is difficult to give any fixed rules, because noses vary in size. Thus, from the orifice of the nostril to the back of the pharynx varies from 10½ centimètres to 9½ centimètres. A medium-sized adult turbinal measures 5 centimètres, but this may be greatly increased by development of the posterior end. Experience must guide the operator.

Operation.—Antiseptic treatment having been carried out, if possible, for several days beforehand (and it should be continued for some days after the operation), the turbinal is anesthetized. Cocaine is, so far, the best anæsthetic. For partial transfixion a small cautery may be used; for complete transfixion a lance-shaped cautery is best. Insinuate the cautery between the mucosa and the bone, at the inferior internal angle of the hypertrophied mass. It is introduced at a dull red heat, passed horizontally and straight back, so as to keep parallel to the side of the turbinal. When 7 or 8 centimètres of your instrument have entered the nasal fossa you stop; you have transfixed the turbinal. There is no hæmorrhage, no inconvenience for the patient, and the consequent retraction taking place along the whole mass removes the obstruction. A second transfixion would leave a canal of appreciable size. For example, in one I was able to pass a *nasal* probe right through and out at the posterior end, so that its point was visible by posterior rhinoscopic inspection.

Advantages.—A single application is usually sufficient, the mucous surface is not injured, synechiæ are never produced. Where the hyperplasia is so marked that even cocaine does not reduce the turbinal sufficiently to admit of the ordinary use of the cautery, transfixion is the only available method. On the other hand, if under cocaine the turbinal is so much reduced as to render transfixion difficult, or even to cause the cautery to break through the mucous membrane from within outwards, you obtain just the same results as from deep linear cauterization or igni-puncture. Even very marked polypoid degeneration of the posterior end of the turbinal usually shrivels up after one transfixion.

Complications.—The same general risks are run in transfixion as in ordinary cauterization, and the same precautions must be taken.

Some authors object (1) that trephining may set up osteitis. It may do so, but very rarely; and when osteitis does occur, it does good rather than harm by preventing any chance of recurrence.

(2) The Eustachian tube may be injured by the cautery point. In ten cases taken at hazard I find the tube had been touched six times. The patients complained of a sensation of fulness in the corresponding ear, and of some whistling sounds, lasting a couple of days.

Lately I have had no trouble with the ears.

One thing is greatly to be desired for this operation, and that is a local anæsthetic which does not produce shrinking of the tissues.

M. CAPART said that hydrochlorate of eucain produced local anæsthesia of the mucous membranes without vascular constriction.

M. BAYER had tried this anæsthetic, but found that it possessed irritant properties, rendering its use disagreeable to the patient.

M. BROECKHAERT. *On Acute Lacunar Tonsillitis.*

Passing over the symptoms, which we all know, consider for a moment the infective nature of this malady. Simple acute lacunar tonsillitis may give rise to nephritis, to swelling of the glands of the neck, to peritonsillar phlegmon, to acute purulent otitis media, to articular affections, and even (Joal) to orchitis and ovaritis. Probably other affections may arise, but this collection is quite sufficient to demonstrate the infective nature of lacunar tonsillitis.

Meyer considers the streptococcus to be the germ of angina, and explains its comparatively frequent absence from cultures by the ease with which it is affected by slight changes in the nutrient media.

M. Sugg has examined fourteen of my cases (from both public and private practice). In twelve the streptococcus pyogenes was found, almost always in pure culture, rarely mixed with diplo- or staphylococcus: in one case diplococcus alone, and in one a pure cultivation of Loeffler's bacillus.

Meyer's investigations, and still more my own results, lead me to believe that lacunar tonsillitis is the local expression of a general disease, due to the penetration of streptococci into the organism through the tonsil, and is to be compared with angina with streptococcal patches (*Angine à plaques streptococciques*) or even with scarlatinal angina.

Microscopic examination of sections of a tonsil removed during the height of the inflammation shows an excessive quantity of migratory leucocytes, both in the follicles and in the tissue proper of the tonsil. In and around the crypts the superficial epithelial cells are separated to some extent, and have undergone necrosis. These are the degenerating squamous cells, which one finds along with numbers of leucocytes on the surface of the tonsil and in the lacunæ. It is to be noted that the membranes are not formed of stratified masses of fibrine; but I believe that amongst the cellular elements there is an amorphous fibrinous substance, varying in quantity according to the intensity of the inflammation. The fibrinous network characteristic of diphtheria is always completely wanting. We have, therefore, to deal not only with an inflammation of the parenchyma of the tonsil, as Fränkel states, but with an inflammation affecting the mucous membrane as well.

M. BROECKHAERT. *Blister produced by an Application of Cocaine to the Skin.*

I was about to introduce some cocaine into the nose of a patient, an officer in the army, but he prevented me, saying that cocaine might produce dangerous results in his nose, as it caused vesication of his skin. I did not believe him, but to test his statement dropped a little cocaine solution on his forearm. Two days later he returned with a crop of small vesicles on the spot. I still remained sceptical, and to make the test more exact and certain I took two small vials, one of which contained distilled water, the other cocaine solution: and telling the patient that they contained cocaine of different strengths, I dropped a little from each on to the skin (the patient's eyes were shut while this was being done). The cocaine produced vesication, the distilled water produced no result. After some time the vesicles dried up, leaving a slightly pigmented scar. It should be noted that perchloride of mercury, carbolic acid, iodoform, and other more or less irritating substances produced no bad effects on this patient. The man is a strong, robust, but slightly gouty subject. The question suggests itself, what would have been the results had the cocaine been applied to the mucous membrane of the larynx instead of the skin of the arm?

M. GORIS had seen a somewhat similar irritant effect in the pharynx, produced by an application of cocaine there.

M. GEVAERT. *Statistics of Diphtheria Antitoxin.*

Soerensen, of Copenhagen, says in the "Therapeut. Monatshefte":—"My severe cases of diphtheria, whether treated with serum or by the ordinary methods, presented not only the same mortality but also the same course and duration. The sero-therapy, therefore, has had no beneficial action on the diphtheritic process in those cases which I have had under my care." Soerensen's views may change when he has to deal with a less severe epidemic.

My earliest experiences with antitoxin did not make me at all enthusiastic for it. In eight months—November, 1894, to June, 1895—I injected serum into five children suffering from severe diphtheria—that form of the disease in which systemic poisoning is marked from the first. All the children died. I also treated with serum twenty children with croup, in whom the toxic effects were very evident, and the rapid development of the local effects necessitated tracheotomy. Only five recovered: mortality, 75; whereas during eight previous years recoveries were 28 per cent.

During the last twelve months, however, my results have been very much better. Of twenty-four children so treated, nineteen of whom were in the dyspnoic stage of the disease, thirteen recovered: 52 per cent.; whereas in the eight previous years the mortalities per cent. were 70, 74, 68, 70, 72, 71, 70, 76.

The last figure, 76 per cent., refers to 1893, and shows that the dreadful epidemic of 1894-95 was already commencing, and further goes to prove that the poor results obtained in that year (1894-95) with antitoxin were

due not to any fault in the method, but to the malignant type of the epidemic.

M. GEVAERT. *Typical Cases of Ménière's Disease.*

True Ménière's disease, characterized by deafness of apoplectiform onset, vertigo, noises in the ears, and vomiting, is a rare disease.

A few months ago I saw a case. A night watchman in a factory fell down a stair, about thirty steps. Stunned at first, he gradually came to himself and tried to rise. At every effort he had an attack of vomiting and fell heavily to the ground. He lay there till the workers arrived in the morning, when he noticed that he heard none of the loud factory noises. The symptoms of vertigo and vomiting tormented him for three months, during which he was constantly confined to bed. Disturbance of equilibrium persisted for eight months; the subjective noises and the deafness are still as complete as they were the first day.

This case may be compared to that reported by Politzer, "*Arch. für Ohrenheilk.*" in which, at the autopsy, a fissure was found, starting in the occipital and passing through both petrous bones, and accompanied by a large extravasation of blood into the labyrinth.

The second case I have to report was even more interesting, as the deafness of apoplectiform onset, the vomiting, vertigo, and subjective noises came on without any traumatic cause. The patient was a well-built, very muscular ship captain, thirty-two years old, who had always enjoyed good health, denied syphilis, and only rarely drank to excess.

During the night of 12th and 13th December, in a fog at sea, he suddenly heard a noise in the right ear: this had lasted some minutes when violent giddiness came on, and he fell on the deck. He did not lose consciousness, tried to rise up, but fell again. He was carried to his bunk, and lay there till his arrival in port on the 15th. On recovering from the first shock he found he was completely deaf in the right ear. Supported by two men he came to me on 16th December. He stated that he had had attacks of vomiting on trying to sit up during the first four days. These had now ceased. Vertigo was constant; he felt as if he were always about to fall into a vast abyss at his side. Subjective sounds were as loud as at first, and were compared to a locomotive's whistle. Examination of the ear: Negative as far as membrane and Eustachian tube were concerned. No functional disturbance in the cerebral or spinal nerves.

Hearing power on right quite lost.

Tuning fork on vertex heard only in left.

Writing considerably altered and trembling.

Treatment.—Iodide and bromide of potass.: hypodermic injections of pilocarpin; rest.

After three weeks deafness remained unaltered; patient could then walk with the help of a stick, and his writing had returned to its normal condition.

M. EITMAN expressed his opinion that in typical cases (like No. 2) treatment should consist in daily injections (in the morning) of hydrochlorate of pilocarpin in doses increasing from $\frac{1}{2}$ centigramme to $1\frac{1}{2}$

centigrammes, and even more. If begun in the first or second week of the disease this treatment gave brilliant results; much better than Charcot's sulphate of quinine.

M. GORIS. *Chronic Sinusitis and the General Health.*

It has long been known that the respiratory apparatus may be affected from the nose, and in my opinion the digestive tract may also suffer, and in either case the general health will be injured.

I have recently had under observation three cases of empyema of the maxillary sinus and one of the sphenoidal sinus, in all of which there were profound alterations in the general condition. Without going into details I simply note that the appetite was almost gone, gastralgia came on after eating, the skin was of an earthy colour, and they all suffered from headaches. These conditions were due to absorption of septic matter, taking place probably partly in the stomach and partly in the affected sinus; stomachic absorption being most important in the sphenoidal cases, local absorption in the maxillary cases. Ordinary treatment for headache, etc., had been of no avail, but drainage of the affected cavities completely restored the patients to good health.

The only treatment recommended for the maxillary sinus is opening in front, free curettage, cauterization with chloride of zinc, and packing with iodoform gauze.

M. NOQUET. *Case of Fibro-Cartilaginous Cellular and Telangiectatic Tumour of the Septum Nasi.*

After giving a short account of bleeding tumours of the septum, and a more particular description of several similar to his own, and pointing out that whereas they form a fairly distinct clinical class, they vary greatly in their histology, M. Noquet described the following case:—

Madame X., aged sixty, complained of the right nasal fossa being obstructed for three or four weeks by a tumour which had suddenly appeared. The tumour sometimes projected beyond the naris, and several times had bled in an alarming manner. General condition of patient excellent. I found a rounded, smooth, greyish-blue tumour, lying about half a centimètre from the nasal orifice and completely blocking that side of the nose. On its surface were marks of previous hæmorrhages. It was about the size of a hazel nut, firm, movable, and arose from the cartilage of the septum by a cylindrical pedicle, about 3 millimètres long and 4 millimètres thick. The rest of the right fossa and all the left fossa normal. Under cocaine I cut through the pedicle with a galvano-caustic knife at a dull red heat. There was neither pain nor hæmorrhage. Four days later I cauterized the point where the pedicle had sprung. In three weeks cicatrization was complete, and there has been no recurrence (fifteen months).

M. Motz examined the tumour microscopically, and reported:—The tumour consists of two groups of different elements not separated by any precise line of demarcation. The central part is fibro-cartilaginous, the periphery cellular, except near the point of origin, where it remains fibro-cartilaginous. The epithelial covering is thin; ciliated cells are only

found here and there in groups of two and three. The blood-vessels are numerous and large all over, but specially so where the cellular element is predominant. There is a true cavernous tissue, chiefly venous. Around this cavernous zone and in the septa between the vessels one finds remains of old interstitial hæmorrhages. The fibro-cartilaginous part consists of fine connective tissue fibres forming a close network, or arranged in bundles of parallel fibres, containing in places small cartilaginous capsules. The cellular part consists of little round, oval, or much elongated cells, the round cells being about the size of white corpuscles. The tumour is therefore a hypertrophic growth, containing the tissue elements from which it originated. There is nothing to indicate the pathogenesis or etiology of the growth.

Tumours of this nature are less liable to cause severe hæmorrhage during operation than pure angiomas, recur less readily, and are less disposed to undergo malignant transformation. Nevertheless, one should always remember that simple tumours of the septum are always more liable to undergo malignant degeneration than those of other organs.

M. WAGNIER asked why M. Noquet did not prefer either electrolysis or the snare for the removal of the tumour.

M. NOQUET thought that with the galvano-caustic knife he could operate without causing any hæmorrhage, and in this he proved correct. Electrolysis would have taken longer, and would have been painful.

M. GOUGUENHEIM had removed several tumours of the septum, and had never seen consecutive hæmorrhage. He always used an iodoform gauze dressing. He had never seen recurrence of a malignant nature.

Arthur J. Hutchison (Trans.).

ABSTRACTS.

DIPHTHERIA, &c.

Baginsky, Adolf.—*The Antitoxin Treatment of Diphtheria in the Kaiser and Kaiserin Friedrich Children's Hospital in Berlin and Dr. Winter's Observations thereon.* "Med. Record," Aug. 8, 1896.

IN the first part of this paper a long quotation is given from Dr. Winter's address (*vide JOURNAL OF LARYNGOLOGY*, Oct., 1896), in which he showed that the statistics of the antitoxin treatment of diphtheria in the Kaiser and Kaiserin Friedrich Children's Hospital in Berlin did not give a true statement of the real results, but were obtained by manipulating both figures and patients. The points in Dr. Winter's paper are then taken up and proved to be incorrect. It appears that Dr. Winter's criticism of the methods adopted in the hospital is based on observations made during one short visit. "His observations and all his conclusions are incorrect, and are based on such faulty observations as to amount almost to misrepresentations."

In the second part of his paper Dr. Baginsky points out :—(1) That the good results obtained with antitoxin are due to the antitoxin, and not, as has often been

asserted, to the mildness of the prevailing epidemic. (2) That larger numbers of mild cases have not been treated in order to swell the favourable statistics, but that, on the contrary, the number of cases admitted has been considerably lessened, and the cases taken have been of the severest kind, yet the mortality has been considerably decreased and the percentage of discharged cured considerably increased; e.g.:—

Jan., 1896.	Number discharged cured.	27	died.	2.	=	6.89 per cent.
Feb. „ „	„ „	25	„	4.	=	16 „
March „ „	„ „	25	„	3.	=	10.71 „
April „ „	„ „	25	„	0.	=	0 „
May „ „	„ „	25	„	3.	=	10.71 „
June „ „	„ „	20	„	1.	=	5 „

Thus percentage mortality for these six months is about 8.22, instead of about 40 to 50 per cent. as it used to be. (3) That he has never seen any bad effects from antitoxin, used either curatively or prophylactically, except in two cases, which he will report in detail later on. (4) That some so-called antitoxins are quite inert; he uses only Aronson's and Behring's. (5) That the complications arising in many cases of diphtheria are to be treated *sec. art.*, and not left to run their own course simply because antitoxin has been used. *A. J. Hutchison.*

Bolton, B. Meade (Philadelphia).—*The Examination of Cultures from Cases of Suspected Diphtheria.* "The Med. and Surg. Reporter," June 27, 1896.

DURING the last seven months of 1895, 1421 primary and 1942 secondary cultures were examined, making a total of 3363 cultures.

Of the 1421 primary cultures, 1207 were made from the throats of persons showing clinical evidence of diphtheria, and 214 were made from the throats of healthy persons who had been exposed to infection. The diagnosis of diphtheria was made by the attending physician in 557 cases; in the remainder of the cases the physician either stated that the case was not diphtheria, or left the matter in doubt. In the 557 cases diagnosed as diphtheria, the bacteriological examination showed the presence of diphtheria bacilli in 507, or 90.2 per cent.

In 148 cases the physician stated that the disease was not diphtheria. The Klebs-Löffler bacillus was found in 40 of these cases, the clinical and bacteriological diagnosis agreeing consequently in 72.9 per cent. According to this, it would seem that in cases of angina which do not show sufficient evidence clinically to be called diphtheria, 27.1 per cent. have the same organism present that is usually found in clinically typical diphtheria. Those who call all anginae caused by Löffler's bacillus diphtheria would regard these as mild or atypical cases of the disease.

If the 557 cases in which the physicians pronounced the disease diphtheria be taken with the 148 that could not be called diphtheria clinically, it will be found that the clinical and the bacteriological diagnosis agree in 86.4 per cent.

Cultures were taken in 214 cases from the throats of persons who had been exposed to diphtheria, but who presented no clinical symptoms. Of these, 89, i.e., 41.5 per cent., showed the presence of the Klebs-Löffler bacillus: 95, i.e., 44.3 per cent., did not show the bacillus, and the others were unsatisfactory. It seems, accordingly, that more than one-third of persons more or less exposed get the bacilli in their throats. It would be interesting to know how many of these persons subsequently develop the clinical symptoms of the disease. In 50 of these cases it was possible to determine that the bacillus persisted, on an average, for 13.3 days.

In 460 cases presenting clinical symptoms of diphtheria, the length of time that the bacilli were present, dating from the appearance of the first symptom to dis-

appearance of the follicli, could be determined. It was found that this varied from 7 to 66 days, the average being 28.3 days, irrespective of treatment.

A. B. Kelly.

Borthwick, T., and Irwin, H. O. (Adelaide).—*Preliminary Note on the Bacteriology and Antitoxin Treatment of Diphtheria.* "Australasian Medical Gazette," June 20, 1890.

A BACTERIOLOGICAL examination was made in fifty throat cases, twenty-five of which proved to be diphtheria.

Of these twenty-five, fourteen were treated with antitoxin, with two deaths. In these fatal cases the serum was first injected on the sixth and seventh day respectively. In other two cases, however, recovery followed when the injection was not made until the sixth day, and in a third case until the ninth day.

In eight of the cases a rash followed the injection, appearing usually about the ninth day. In seven of these it was urticarial, and lasted from two to six days. In the other cases it was scarlatiniform and transitory.

The diagnosis was made correctly in twelve of the twenty-five cases, in five it was doubtful, and in eight the disease was said to be tonsillitis.

By "post examinations," the throats were proved to be free of infection in from four to twenty-eight days.

In one case in which antitoxin was not used the patient was reinfectd in four weeks, and in another in which it was used there was recurrence in six weeks.

A. B. Kelly.

Flick, Lawrence F. (Philadelphia).—*Calomel a Specific in Diphtheria.* "The Medical and Surgical Reporter," June 13, 1895.

IN this paper five cases are described, in all of which diphtheria was diagnosed by bacteriological examination. As a result of the author's observations, he regards calomel as a specific in this disease. He usually begins with a sixtieth of a grain (rubbed up with sugar, and placed dry on the tongue) every fifteen minutes, and increases or decreases the dose according to the constitutional effects. Nasal insufflations of calomel—either pure, or with two parts of sugar of milk—are also employed.

He attributes the good effects obtained by the drug to its local germicidal action. The frequent repetition of the dose keeps up a constant sterilization of the soil, and the small quantity prevents undue constitutional effects. In no other way can be explained the failure of the action of the calomel upon the membrane of the nose when given by the mouth alone, and its speedy action upon the nose when used by insufflation.

A. B. Kelly.

Hennig (Königsberg, Pr.).—*On the Practical Value of the Diphtheria Bacillus.* "Volkmann's Klin. Vorträge," Nf. No. 157, 22 pp., Leipzig: Breitkopf & Härtel, 1896.

THE author has often observed that simple follicular anginas in which no diphtheria bacilli are found may be converted into grave septic anginas; that cases in which the bacilli are found may have a harmless course; that some cases of membrane on the tonsils and the velum are without the specific bacillus. Therefore the bacillus cannot be viewed as characteristic of diphtheria. Thirty-five cases were examined: in ten Loeffler's bacillus was found; in all the other cases other micro-organisms. Also specific paralyzes followed sometimes cases in which no bacilli were found. Often virulent bacilli are found in the mouths of healthy persons. The author therefore believes that it is only practical to regard the clinical symptoms. Also the results of serum therapy are not at all convincing, and are not better than with

other treatment. With his simple treatment (ice, cleansing, aq. caldis, liq. ferri), the author had, in 1913 cases, 59 equal to 3.08 per cent.) deaths.

Michael.

Kellock, T. H.—*Intubation versus Tracheotomy in Diphtheria.* "Lancet," Oct. 3, 1896.

CONSIDERS tracheotomy to be preferable to intubation, from a nursing point of view, in those cases where help cannot be obtained immediately during the first thirty-six hours, and when the obstruction in the first instance was severe. But he holds that the fact that, in the past, results of intubation instead of tracheotomy in diphtheria have been unsatisfactory is no argument against employing it in the future, now that in antitoxin serum we have such a valuable aid in the treatment of the disease itself. He, therefore, claims that when combined with the injection of antitoxin serum intubation has the following advantages over tracheotomy: (1) the operation can be performed more readily and with less assistance; (2) it does not need an anesthetic; (3) the tube can be removed at an early date, leaving no wound, and no passage for the respired air except *per vias naturales*; (4) it does not require the patient being kept at any time in an artificially warmed and moistened atmosphere, and obviates the dangers to the lungs of unfiltered air being breathed straight in; and (5) it can be employed in cases where the parents or friends refuse leave for the "cutting operation." Tracheotomy has the advantage in those cases where there is a large amount of membrane below the larynx, and also in those cases mentioned above, where, from a nursing point of view, it is unsafe to leave a patient with an intubation tube in the larynx.

St Clair Thomson.

Loos (Graz).—*The Blood Serum of Healthy and Diphtheritic Children in its Relation to Diphtheria Toxin.* "Jahrbuch für Kinderheilk.," Band 42. Heft 3, 4.

THE author concludes:—Injections of heilserum increase the antitoxic power of the blood. This is proved by experiments in animals. The so-called prophylactic injections of blood serum do not produce an increase of the antitoxic power of the blood serum to any great extent. Natural diphtheria produces an increase of the antitoxic power after a longer period. During the disease, or shortly afterwards, examination of the blood serum shows no increase of the antitoxic power. In severe forms of the disease diphtheria toxin can be found in the blood by experiments on animals. A relation seems to exist between possibility of infection and the manner of its progress to the bulk of natural antitoxins. The natural antitoxic power lasts for a longer time. If the artificially-induced antitoxin has the same power it is not yet demonstrated.

Michael.

Martin, Sidney.—*The Serum Treatment of Diphtheria.* "Lancet," Oct. 17, 1896.

THE essentials of treatment are: (1) a large dose of antitoxic serum, reckoning in normal units; (2) which must be given as early as possible in the disease; and (3) which must be given in one dose, and not subdivided. In cases of faucial and pharyngeal diphtheria local treatment is also employed, usually consisting of a steam spray of bicarbonate of soda (20 grains to the ounce) every four hours, and a similar spray of corrosive sublimate (1 in 2000), also every four hours, so that the throat is sprayed every two hours. If there is a nasal discharge, a douche of bicarbonate of soda is used, and in laryngeal cases a warm spray of the same solution is employed. At one time it was attempted to do without the local applications of antiseptics to the throat, but several cases of glandular abscesses of the neck occurred, so that the local applications were begun again, and no more

abscesses have occurred. The strength of the serum used is about 4000 units in five centigrammes, and as this is a convenient amount to inject into a child it is more serviceable than when forty centigrammes have to be given in order to administer 4000 normal units. Martin, now, never gives a dose of less than 4000 units, and more frequently he gives 8000. No bad results have been observed from the use of the antitoxin. The beneficial results have not only been seen in the tables of mortality, but are also observed at the bedside. (1) It stops the growth of the membrane. In an ordinary pharyngeal case the effect is not usually seen for twelve or even twenty-four hours, and during this time the membrane may even spread; at the end of this period the spread of the membrane ceases. (2) In no instance has it been observed that a case which was simply pharyngeal on admission became laryngeal, and necessitated tracheotomy. (3) No cases have proved fatal, unless they were severe on admission. (4) A day or two after the injection, patients usually lose that earthy pallor which is so frequent in diphtheria, and their natural colour in part returns. *StClair Thomson.*

Monti (Wien).—*Further Contributions on the Application of Heilserum in Diphtheria.* "Archiv für Kinderheilk.," Bd. 21, Heft 1-3.

THE author describes a fibrinous form, a mixed phlegmonous form, and a septic gangrenous form, of diphtheria. He then reports on 104 cases—of which 72 are fibrinous, 26 mixed, and 6 gangrenous—treated during 1895 with heilserum. Of the 72 cases of the first form, 6 died; of the 26 of the second form, 10 died; of the 6 of the third class, 5 died. The author recommends this form of treatment. In 35 of the cases remote effects of the serum were observed. *Michael.*

Richards, Meredith.—*Post-Scarlatinal Diphtheria.* "Lancet," Sept. 26, 1896.

DIPHThERIA and post-scarlatinal diphtheria are both much less common in the provinces than in London. He holds that there is nothing special or peculiar in the etiology of post-scarlatinal diphtheria, but that it simply depends on the amount and virulence of the diphtheria existing among the population from which the patients are derived. In the author's hospital, when cases of diphtheria were excluded during a period of eighteen months, although there was an average of three hundred to three hundred and fifty scarlet fever patients under treatment, no case of post-scarlatinal diphtheria was met with. But once it became the custom to also admit cases of diphtheria to the hospital, other outbreaks occurred amongst the patients convalescing from scarlatina. The fact that diffusion of diphtheria takes place as a rule during convalescence, is explained by the greater personal contact which then occurs between patients. *StClair Thomson.*

Schmidt and Pflanz (Graz).—*Relation of Human Milk to Diphtheria Toxin.* "Wiener Klin. Woch.," 1896, No. 42.

THE author concludes: The alexins which are in the blood of the puerpera also enter the milk, but they are not in so large a proportion in the milk as in the blood; therefore a much larger quantity of milk must be applied to produce the same effect. Babies rarely are affected with diphtheria. It is a question if the newborn are immunized by congenital antitoxin or by the use of antitoxic milk; probably the immunity is produced by both circumstances. *Michael.*

Steigenberger.—*Collective Report on Serum Treatment of Diphtheria in Hungary.* "Pester Med. Chir. Presse," 1895, No. 18.

Of 270 cases of diphtheria, 214, equal to 79.7 per cent., were cured; 65, equal to 23.3 per cent., died. Of 175 cases treated exclusively with serum, 120, equal to 68.7 per cent., were cured; 46, equal to 26.3 per cent., died. *Michael.*

Wassermann.—*Personal Idiosyncrasy and Prophylaxis against Diphtheria.* "Zeitschrift für Hygiene," Band 19.

THE author has mixed the blood of seventeen children and thirty-four adults with lethal doses of diphtheria toxin, and has injected it to guinea-pigs. He could prove that some persons have blood with strong antitoxic effects, whilst the serum of others has no antitoxic power at all. The difference in the existence of antitoxic substances in the blood causes the difference of liability to acquire diphtheria.

Michael.

Wassermann.—*Concentration of Diphtheria Antitoxins contained in the Milk of Immunized Animals.* "Zeitschrift für Hygiene," Band 18, 1894.

ONE HUNDRED AND FIFTY CENTIGRAMMES of the milk are mixed with thirty-three per cent. ammonium sulphate, filtered, dried, and dissolved in water. The solution thus obtained contains all the antitoxins of the milk.

Michael.

Wilbur, Cressy L.—*Age and Sex Incidence of Mortality in Michigan from Diphtheria and from Croup during Twenty-five Years, 1870-94: a Statistic Study.* "The Journal of the Amer. Med. Assoc.," Aug. 15, 1896.

THE object of this paper is not to support or condemn the antitoxin or any other method of treatment of diphtheria, but rather to give an impartial account of the prevalence of diphtheria in Michigan, and one as accurate as the available statistics would permit, and so help in advancing our knowledge of this disease. "The study will chiefly show (1) the availability of mortality statistics known to be imperfect in certain directions for use in certain other directions, as evidenced by the constancy and clearness of their testimony; (2) the characteristic differences in the age and sex incidence of diphtheria and croup, and, inferentially, the inexpediency of confusing their statistics under the term 'diphtheria and croup' from a statistic point of view; (3) the desirability of ascertaining the causes, and, so far as practicable, of preventing the increased relative mortality from diphtheria of female children on reaching the age of five years and upwards."

The paper is too elaborate to permit of a satisfactory abstract being made, specially as it contains several long tables (one graphic); at the same time it is a paper that anyone interested in the statistics of diphtheria will find worthy of study.

A. J. Hutchison.

Wolf Moritz.—*Accessory Cavities of the Nose in Diphtheria, Measles, and Scarlet Fever.* "Zeitsch. für Hygiene," Band 19, 1895.

IN twenty-two cases of diphtheria the author examined the accessory cavities of the nose. In all cases the Highmore antrum was affected, and in the greater number of cases the other accessory cavities also. The infection of the accessory cavities was in all cases bilateral. In twelve cases Loeffler's bacillus was found; in the rest streptococci. In five cases of measles and three of scarlet fever inflammation of the accessory cavities was found.

Michael.

MOUTH, &C.

Egger.—*Two Cases of Velo-Palatine Insufficiency.* "Ann. des Mal. de l'Oreille et du Lar.," April, 1896.

THIS condition was described by Lermoyez (Annals, March, 1892) as a congenita anomaly—an arrested development in which the soft palate, though normal in appearance, is apparently too short, leading to insufficiency of closure of the upper

pharyngeal cavity, the shortness being due to arrest of development of the osseous palate. The symptoms produced are defective pronunciation, nasal voice, and sometimes regurgitation of fluids through the nose. Lermoyez published twelve cases, Castex one, which, with the author's two cases, make fifteen. According to Lermoyez's measurements, the length of the osseous palate, from the incisor to the posterior limit, should be sixty-one millimètres: in the author's two cases it was respectively forty-eight and fifty-eight millimètres. The length of the normal soft palate to the base of the uvula should be twenty-four millimètres; in the author's two cases it was respectively twenty-eight and twenty-five millimètres. The width of the naso-pharynx should be normally fourteen millimètres; in the author's two cases it was respectively fifteen and twenty-two millimètres. As an additional proof of developmental arrest, in one of his cases there existed congenital bi-lateral inguinal hernia; the lobules of the ears were adherent. In the second case the presence of hammer toe, and the superior lateral incisors were absent in both, a sign of degeneration according to Fraenkel.

R. Norris Wolfenden.

Lacoarret.—*Post-Diphtheritic Pseudo-Hypertrophy of the Tonsils.* "Rev. de Laryn., d'Otol.," May 23, 1896.

THE author relates a case where the tonsils assumed an enormous volume without the least trace of inflammation, in a child four years of age attacked with diphtheria. They afterwards diminished in size until they appeared absolutely atrophied. He regards the pseudo-hypertrophy as of toxic nature, a kind of lymphadenoma provoked by the diphtheritic poison, and surgical intervention would be useless and possibly dangerous. With the elimination of the poison the tonsils renewed their usual size, and may be even completely atrophied.

R. Norris Wolfenden.

Meeray, P. M., and Walsh, J. J.—*Some Notes on the Bacteriology of Mumps.* "Med. Record," Sept. 26, 1896.

DURING an epidemic of mumps in the Camden Home for Friendless Children, the authors investigated, bacteriologically, the secretion obtained from Steno's duct, also the blood, and succeeded in isolating from both a diplococcus, which, they consider, may be regarded as the pathogenic organism. Ten test tubes were inoculated with the parotid secretion: six gave a mixed growth, but in all of them there was noted a small, white, slow-growing colony. This consisted of strepto and diplococcus. The diplococcus form was found certainly in eight of the tubes.

Eight tubes were inoculated with blood drawn from the lobe of the ear. Two gave entirely negative results, three gave pure cultures of the characteristic diplococci, and three gave a mixed result, the diplococci being found, but with them other cocci, specially a staphylococcus, probably the staphylococcus epidermis albus.

A. J. Hutchison.

Price, William Henry (Philadelphia).—*Jack-stone in the Oesophagus located by the Röntgen Ray.* "The Medical and Surgical Reporter," June 20, 1896.

A GIRL, aged two and a-half years, swallowed a jack-stone. Ten days later, when she came under the author's observation, she was fretful, suffering from general malaise, and losing flesh. She was able to take liquids only, and could swallow neither solid nor semi-solid food, solid food being regurgitated in a second or two.

From the ability to swallow liquids and not solids, and the prompt vomiting of the latter after ingestion, it seemed evident that the jack-stone was in the oesophagus. The case was therefore referred to the surgeons, who obtained a good skiagraph of the chest, which showed the stone to be in the oesophagus, nearly

opposite the second rib. Dr. J. William White afterwards operated successfully, and removed the stone. *A. B. Kelly.*

Schmidt (Dusseldorf).—*The Cicatricial Adhesions of the Pharynx and their Treatment.* Dusseldorf: Schneider, 1896.

THESE cicatrices are nearly all caused by syphilis, and in spite of the mobility of the soft palate they easily arise, because the cicatricial process begins on the sides, and thus itself decreases more and more the mobility of the central parts. The adhesions of the palate and naso-pharynx cause difficulties of speech, nasal obstruction, deterioration of hearing, smell, and taste. For operation the author applies cocaine narcosis, and separates by cutting the palate from the naso-pharyngeal wall. To prevent readhesion he inserts a tube, which is combined with a palate retractor. The author reports one case in which he has applied this method with a good result. In cases of adhesion of the oval part of the pharynx the author performs preliminary tracheotomy; then divides the adhesions and dilates with lacunar bougies. This method, also, he has applied in one case with excellent result. *Michael.*

Straight, H. S.—*Unresolved Amygdalitis.* "New York Med. Journ.," Sept. 26, 1896.

THIS paper is based on two cases in which a tonsillitis, apparently simple, refused to yield to ordinary treatment. In the first case, that of a boy aged ten years, a localized capillary bronchitis was found in the right apex; creosote was administered, and this speedily removed the tonsillar inflammation and more gradually the lung trouble. The second in a girl of twenty-one, a tonsil inflamed one month after partial excision; and it was only after some time, finding a slight catarrhal condition in the apices of the lungs and resorting to creosote treatment, that a cure was obtained. *R. Lake.*

NOSE, &c.

Ingraham, Charles W.—*Cocaine applied to the Mucous Membranes of the Nostrils a Specific for Nausea.* "American Med. Surg. Bull.," Aug. 15, 1896.

Two years ago the author accidentally discovered that the application of a two per cent. solution of cocaine to the nasal mucous membrane almost instantly, in the majority of cases, relieves nausea; and his experience since then shows it to be a very reliable remedy, if not a specific for nausea. He thinks, though he quotes no cases in support of his belief, that this treatment will prove of more than ordinary value in the obstinate vomiting of pregnancy, and in those morbid conditions of the stomach in which vomiting is not only constantly threatened, but in which it does great harm. To be effective the cocaine solution must be sprayed over the upper olfactory portion of the nose. Probably no effect would follow its application along the lower respiratory portion. It is also probable that a two per cent. solution will not suit every case, but that the strength of the solution will have to be varied. *A. J. Hutchison.*

Mermod.—*Meningo-Encephalitis, consecutive to Exploration of a Supposed Frontal Sinus.* "Ann. des Mal. de l'Oreille," April, 1896.

THE patient, a man aged thirty-six, had suffered for several years from pain at the root of the nose, frontal and occipital headache, with considerable nasal discharge.

The meatus was filled with muco-pus, of which it was difficult to discover the source. The wholly degenerated middle turbinateds were resected, large polypoid masses were removed, and the maxillary sinus was opened through the alveolus; the left sphenoidal sinus, which was filled with pus and large granulations, was treated by resection of the anterior wall. The right anterior and middle ethmoidal cells, when opened, also contained pus and large granulations. Four months afterwards the patient was much relieved, the nose was completely free and normal, and there was no trace of pus. He had, however, an intermittent aqueous secretion, and the headache was intense and exclusively frontal, especially on the right side, diminishing every time after an abundant evacuation of this clear liquid resembling water. The author first treated him for nasal hydrops without result. The case appeared to him to resemble those reported by Lichtwitz, in which the nasal secretion came from the frontal sinus and was caused by puncture through the nose. Electric illumination was negative, symptoms were very obscure, and catheterism failed because the canula seemed to be arrested at the entrance of the infundibulum, as if it terminated in a *cul de sac*. It was difficult to determine in favour of trephining the frontal, or artificial opening through the nasal fosse, a method always repugnant to the author, and the sequelae of this case will not encourage the employment of this, one of the most dangerous methods. Before introducing the trocar into the sinus as Schaeffer does, Mermod wished to explore the upper region of the nasal fosse with a thin curved probe, which was done.

After careful sterilization of the parts, it was carefully passed as close as possible behind the nasal bones. He remarked with surprise that the instrument entered a large cavity without meeting any bony resistance, which appeared to be a very extensive frontal sinus, and the probe having apparently traversed an opening from the nose into the sinus. The author judged it prudent to withdraw the probe after passing it seven and a-half centimètres from the entrance, which was followed by a great increase of his cephalalgia. An iodoform plug was introduced, and the patient put to bed. At the end of an hour the cephalalgia ceased, but during the evening the patient discharged a quantity of serous fluid. He returned to his occupation the next day. Eight days afterwards he was in his former condition. Before performing trepanation of the sinus, and in order to collect a little of the serous liquid for further examination, the author introduced a canula one millimètre in diameter through the same path taken previously, to a depth of six and a-half centimètres measured from the external nares, and supposed it to be in the sinus at the level of its floor. There flowed through the canula some grammes of a clear liquid-like water, and great pain obliged him to withdraw the instrument. Being assured that the second exploration had been performed even more cautiously than the first, the patient was allowed to return to his home. Twenty-four hours after the puncture he had undoubted signs of meningitis. He was sent into the hospital under Prof. Roux, who trephined him over the frontal region, when it was discovered that the frontal sinus was absolutely wanting, that region being filled by the frontal lobes. The dura mater was violet green, and on opening it the brain protruded into the wound as if pushed forward by considerable intracranial pressure. A probe introduced above penetrated easily into the nose, and a tube was introduced into the right nostril. Exploration did not discover the existence of any accessible intercerebral abscess. The flap was replaced and the wound closed. The patient died forty-eight hours after. The autopsy gave no explanation of the cephalalgia. As there was no sinus the liquid could only have been cerebral, collecting between the frontal lobe and the dura mater, and flowing intermittently. The brain presented no sign of traumatism, and it was into this space that the sound had penetrated. There were two holes at the base

of the skull, the first scarcely perceptible, three centimètres behind the nasal spine, through which, perhaps, fluid escaped: the second two and a-half millimètres behind the posterior surface of the osseous wall, eleven millimètres from the nasal spine, and at least a centimètre in front of the lamina cribrata. It would have been impossible to have explored more forwards, or that the operation could have been more prudently performed. If, with all precautions, exploration of the frontal sinus through the nose is able to lead to such a deplorable result, what can be said for operations such as Schaeffer's, where the opening of the sinus is performed by pushing a trocar from below upwards in the nose? Entering the frontal sinus through the nose except by the natural canal is always a dangerous proceeding, and where catheterism of the nasofrontal canal is impossible the author would not hesitate to make an exploratory trepanation. Schaeffer's method is far from fulfilling that elementary condition of surgery which enforces opening a diseased cavity as fully as possible, so that none of its parts escape inspection and radical treatment. To judge by the most recent publications (Kuhnt, Grünwald, Janssen) it is to be desired that the treatment of sinusitis should be surgical, and that timid intervention should be abandoned. The author has himself opened fifty frontal sinuses by resecting the anterior wall.

R. Norris Wolfenden.

Pearse, E. A. (Boston).—*A Case illustrating a New Method of Introducing a Plate for Restoring a Depressed Nose.* "Boston Medical and Surgical Journal," July 23, 1896.

IN this case the author introduced an aluminium plate, one inch long and five-eighths of an inch wide, trough shaped with rounded corners, through an incision made from within the nostrils, separating the skin from its attachments over the nasal bones and the nasal process of the frontal bone. He found no difficulty in slipping the plate into position. When fixed it rested on the nasal process of the frontal bone above, and the lower end of the nasal bones and cartilage below. The result was eminently satisfactory. The shape of the nose was restored, and the plate remained *in situ* without causing the slightest inconvenience.

StGeorge Reid.

Porcher, W. P. (Charleston).—*The Treatment of Ozaena, with a Case.* "Trans. South Carolina Med. Assoc.," April, 1896.

THE author seeks to draw forth some hints as to some curative form of treatment in atrophic rhinitis. He quotes authorities as to etiology, and gives, besides, all other accepted views as to possible causation, but says he has had but poor success in treating these cases. He quotes an illustrative case in a patient, aged 34, who had suffered for fifteen years. In this case Dr. Porcher opened the left ethmoidal and antral cavities with no result. He finally obtained partial relief by plugging with wads of wool soaked in pot. iod. 5iiss. i-oline grs. 40, glycerine ʒi.

R. Laë.

Scheppegrell, W.—*The Use of Peroxide of Hydrogen in Diseases of the Nose, Throat, and Ear.* "Med. Record," Aug. 8, 1896.

PEROXIDE of hydrogen is very useful in cases of ozaena (25 per cent. solution), applied either alone or after the usual douche of alkali or normal physiological salt solution. The nostrils are thus kept clean and the smell prevented. In purulent rhinitis a 5 per cent. solution should be used. In membranous rhinitis, whether due to Klebs-Loeffler bacilli or to micrococci, a 20 to 25 per cent. solution gives excellent results. In syphilitic necrosis its power of disinfecting and deodorizing renders it of great value. Again, in disease of the accessory cavities it is the most satisfactory cleansing and disinfecting agent we have.

In the throat it is useful in follicular and other forms of tonsillitis, and is a sheet anchor in diphtheria. Scheppegegrell uses antitoxin along with it, but attributes his good results largely to the H_2O_2 . He quotes one case in which, on failing to get an intubation tube to remain in the larynx, he injected with a laryngeal syringe a 75 per cent. solution of H_2O_2 . This so relieved the dyspnoea that intubation was no longer required. The injections were repeated every four hours, antitoxin was given, and the child recovered.

He has not noticed the irritant effects reported by some foreign writers. This may be due to the facts that he adds a little sod. bicarb., and that he varies the strength of the solution according to the requirements of the case. In the ear it is equally useful in all suppurative cases, specially those with fœtor.

A. J. Hutchison.

Swoboda (Wien).—*Etiology of Melæna*. "Wiener Klin. Woch.," 1896, No. 41. THE author quotes four cases of melæna neonatorum. In the first case the child had gonorrhœal conjunctivitis, and a rhinitis also, caused by the gonococci. The child, at the age of ten days, had hæmorrhage from the nose and mouth. The *post-mortem* examination showed necrosis of the nasal bones and loss of substance in the mucous membrane of the nose, and subcutaneous hæmorrhages. The case must be viewed as an acquired hæmophilia by septicæmia, caused by the rhinitis. In the second case, that of a child affected with purulent rhinitis, violent nasal hæmorrhages arose, followed by melæna, with death. Here the *post-mortem* examination showed pachymeningitis vasculosa. This affection must also be regarded as an effect of the hæmorrhage. In two other cases which died from nasal bleeding the *post-mortem* examination showed membrane in the nose, and on bacteriological examination diphtheria bacilli were found in the membranes. Here the diphtheria is the indirect cause of death. The cases show the great importance of the examination of the naso-pharynx in cases of melæna. In a great number of cases it will be proved that there was not melæna vera, but melæna spuria.

Michael.

Tilley, Herbert.—*An Investigation of the Frontal Sinuses in One Hundred and Twenty Skulls from a Surgical Aspect, with Cases illustrating Methods of Treatment of Disease in this situation*. "Lancet," Sept. 26, 1896.

A THOROUGH knowledge of the anatomy of the sinuses is the first step necessary to explain the varying results which have been obtained with treatment, and also to enable one to adopt more uniformity in dealing with diseases in this situation. With regard to the frontal sinuses—with which this paper is only concerned—the author first notes the striking and extreme variation in their size. Thus, one sinus may be only large enough to contain an ordinary bean, whereas the other one will be ten times as large; there may be no sinuses at all; or the sinus may be absent on one side and quite well developed on the other. The septum is always complete, and hence reports where the two sinuses have been said to freely communicate should be received with reserve. The prominence of the superciliary ridges is no guide as to the extent or presence of the sinuses beneath them. The depth of the infundibulum from the anterior surface varies very much; it may be as deep as twenty-eight millimètres, and is much further back than is generally supposed. The direction and patency of the frontal nasal passage varies very much.

In view of these observations the author thinks that the best method of operating for frontal empyema is from the outside, by a central vertical incision, and maintains that the scar left by this incision is less noticeable than that left by an opening over the internal angular process. Schæffler's method of puncturing the

frontal sinus from the nose is, from the above anatomical considerations, condemned as dangerous. The rule laid down by Hajek and others is insisted on, viz., that the maxillary antrum should be in every case explored before interfering surgically with the frontal sinus. Three cases of empyema of the frontal sinus are recorded.

StClair Thomson.

LARYNX.

Barton, Joshua Lindley.—*Diseases of the Trachea, Bronchi, and Lungs, treated by Intratracheal Injection.* "Med. Record," Aug. 1, 1896.

AFTER touching very briefly on the physiology of the trachea, and sketching the history of intratracheal injection as a method of treating diseases of the trachea, bronchi, and lungs since its introduction by Dr. Horace Green, of New York, Dr. Barton sums up his opinions and experience of the method as follows:—

This method of medication has many advantages, viz.:

1. The remedy is applied directly to the irritated mucous surface.
2. It immediately relieves the most distressing symptoms, adding at once to the comfort of the patient.
3. In a certain number of cases the antiseptic effect of the medicine is very pronounced, as shown by the longer interval between the febrile attacks and by their lessened intensity when they do occur.
4. The tracheal and bronchial mucous membrane rapidly absorbs the medication, so that we may expect a general as well as a local effect.
5. We avoid disturbing the patient's stomach with nauseating doses, and shattering his nervous system with opiates.
6. This method of alleviating the most distressing and annoying symptoms does not interfere in the slightest degree with any other line of general treatment which may be deemed advisable.
7. In cases characterized by an atrophic condition of the tracheal mucous membrane, or of pulmonary disease with cavitation leading to retention and decomposition of the secretions, intrabronchial injections will remove the disgusting fœtor of the breath consequent upon this condition.

A report is given of ten cases. The remedies injected were eucophen and menthol, or guaiacol and menthol in solution in benzoïnol.

Of the cases reported, four were tubercular, and under treatment improved greatly; four were cases of laryngeal tracheitis, and all were cured—at least symptoms disappeared; one case of asthma improved, and one of bronchitis with asthma was cured.

A. J. Hutchison.

Bauer.—*Two Cases of Subcutaneous Emphysema during Intubation.* "Pester Med. Chir. Presse," 1895, No. 49.

Of eight hundred cases of intubation, emphysema was observed only in two. (1) In a four-year-old child, who coughed out the tube the next day, which was found obstructed by a thick pseudo-membrane. Next day emphysema arose on both sides of the neck and thorax. This, however, disappeared during the following days. (2) A four-year-old diphtheritic patient, who was intubated. Next day the tube and a great deal of membrane were coughed out. The next day emphysema of the skin of the whole body came on, but disappeared gradually in this case also.

Michael.

Brown, J. Price.—*Clergyman's Sore Throat.* "Amer. Med. Surg. Bulletin," Oct. 3, 1896.

By the term "clergyman's sore throat" the author seems to mean any throat trouble occurring in clergymen (one case of probable malignant disease of the larynx is included). He reports ten cases. All complained of hoarseness and more or less marked weakness of voice. Nasal obstruction was present in all but one case; and the removal of the obstruction, together with some simple spray to the throat, was the only treatment required in the majority. When a granular condition of pharynx and naso-pharynx was present, the treatment used was galvanocaustic. Elongated uvula and hypertrophied tonsils were present in one or two cases; they were cut. In one case an ulcer of the hyoid fossa was found and was treated with lactic acid. In only one out of the ten cases was the disease purely laryngeal. The diagnosis was not certain; it lay between chronic laryngitis and malignant disease. This was the only case in which the clergyman was unable to return to and continue his vocation. In one other case—viz., the one with ulceration of the hyoid fossa—the patient required to take special care of his throat; but all the rest were restored to full use of their voices. The term, "clergyman's sore throat," is misleading, and should be abolished.

A. J. Hutchison.

Bubere (Wien).—*Foreign Body in the Bronchus. Death from Perforation of the Pulmonary Artery.* "Wiener Med. Woch.," 1896, No. 35.

A PATIENT, thirty-eight years old, complained of hæmoptosis, and for some weeks he had had a cough with copious purulent expectoration. The physical examination showed a normal left lung, but the right side gave all the signs of infiltration. The sputum was foetid, and tubercle bacilli were not found. Some days later sudden death occurred from hæmoptosis. The *post-mortem* examination showed infiltration of the right lung, and in the right bronchus a piece of wood, which had perforated the bronchial wall and the wall of the pulmonary artery. It was remarkable that the patient did not suspect that a foreign body had entered his bronchus.

Michael.

Compaired.—*A Case of Influenzal Hemorrhagic Laryngitis.* "Ann. des Mal. de l'Oreille," May, 1896.

THE patient, a young girl, was feverish, absolutely aphonic, and suffered with repeated coughing attacks, with hæmoptosis. A pronounced hyperemia of the pharyngo-laryngeal mucous membrane was accompanied by confluent hæmorrhagic points and large vascular patches on the vocal cord, by varicosities and hæmorrhagic points on the ventricular bands, the inter-arytenoid space, and arytenoid regions. Suitable treatment with sprays every three hours of aqueous solutions—antipyrine six per cent. and cocaine one per cent., with tannin and pastilles of menthol, cocaine and chloro-borate of soda—cured the patient eighteen days after the onset. This is probably the most extreme case of such an affection yet recorded.

R. Norris Wolfenden.

Cott, George F. (Buffalo, N.Y.).—*Erythema Nodosum Trachealis.* "The Med. and Surg. Rep.," Aug. 15, 1896.

THE author applies the above term to a condition which is not a disease *per se*, but a symptom of considerable importance when accompanying that particular lesion of the skin. Erythema nodosum trachealis may prove extremely dangerous to life if it remain unrecognized and the symptoms be treated lightly. This might readily occur, for there may be but slight evidence in the mouth, throat, and pharynx, and none at all in the trachea, as the following case proves:—

The author was hastily summoned to see a gentleman, aged thirty-five, who was suffocating. On his arrival the patient was found sitting in a chair breathing

with difficulty. On making a laryngoscopic examination, mild laryngitis was found, with slight oedema of the false cords, but not sufficient to hide the true cords entirely, which were red and somewhat thickened; the voice was quite clear. The subglottic tissue was plainly visible, but left sufficient room for respiration.

Steam inhalations and cocaine had been used for several hours without benefit. Intubation was then tried with various tubes, but an obstruction was always encountered deep down in the trachea. As the patient was rapidly getting worse, it was decided to perform tracheotomy. While attempting to lead him into another room he suddenly collapsed and became unconscious. He ceased to breathe almost as soon as the table was reached, and the pulse became weak. An incision was at once made down to the trachea regardless of vessels. After a tube had been introduced and the profuse bleeding attended to, he began to breathe feebly. In half an hour he got up and walked to his bed. He afterwards made an uninterrupted recovery.

The early history of this case is as follows :—

The patient, who had enjoyed previous good health with the exception of an attack of rheumatism five years before, first noticed an eruption on his legs, to which he paid little attention. Four days later he felt some soreness in the throat, and that night he had an attack of difficult breathing, which, however, passed off again. Two days later he had a second attack, which lasted four hours, when tracheotomy was performed.

The peculiar eruption noticed over the tibiae and forearms was diagnosed as erythema nodosum. It went through a typical course, producing successive crops, which no doubt was the case in the trachea also, the first obstruction disappearing and a second forming and nearly causing death.

A. B. Kelly.

Franklin, Melvin (Philadelphia).—*Intubation of the Larynx in Diphtheria, with Report of Twenty-five Cases.* "Med. News," July 25, 1896.

In the twenty-five cases there were only three deaths, two from paralysis of the heart and one from pneumonia; six of the cases suffered from nephritis; the tube was left in from two to five days, depending a great deal on the age of the patient. The author advises the use of a spray of 1-5000th solution of mercuric chloride in every case.

StGeorge Reid.

Galatti (Wien).—*Cicatricial Structure after Intubation.* "Jahrb. für Kinderheilk.," Bd. 42, Heft 3 and 4.

Two cases of stricture were observed by the author in thirty-one intubations for diphtheria. (1) A child, aged one year and eight months, was intubated for eleven days; several trials to remove the tube failed, because the stenosis persisted. After the eleventh day the tube was removed, and five days later fresh symptoms of stenosis arose, increasing in severity, and, as tracheotomy was not allowed, the child died a few days later. The *post-mortem* examination showed "*stenosis laryngis post decubitus cum perichondritide cartilaginis cricoideae ex intubatione bronchitis purulenta, etc.*" (2) A girl, eighteen months old, ill with diphtheria, was treated with Behring's heilserum, but, becoming dyspnoëic, was intubated. The child was intubated two hundred and thirteen hours in twelve days. Every trial to remove the tube failed, because the dyspnoea reappeared. As the dyspnoea did not disappear tracheotomy was performed. But a month later removal of the canula was impossible. Laryngo-fissure was next performed by Gersung. The operation showed the larynx to be closed by a cicatrix in the region of the cricoid cartilage. The cicatrix was removed and the new surface covered with transplanted

epidermis, and a double canula introduced. But in spite of repeated dilatation with various instruments the child left the hospital with a canula, and could not breathe by the mouth.

Michael.

Gibb, Joseph (Philadelphia).—*An Unusual Case of Papilloma of the Larynx.* "Philadelphia Polyclinic," Aug. 15, 1896.

THE growth occupied a position in the locality of the anterior commissure, and was about the size of a small cherry, with a broad base situated between the cords. The peculiarity of the case consisted in the unusual depth of the larynx, all the ordinary laryngeal forceps failing to reach the growth. By means, however, of a specially constructed pair of forceps, resembling Mackenzie's, but with the blades an inch longer and bent at a more acute angle, with antero-posterior movement, the tumour was successfully removed.

St George Reid.

Glover.—*The Acute Form of Primary Pseudo-Membranous Rhino-Laryngo-Bronchitis. Bacteriological Examination. Autopsy.* "Ann. des Mal. de l'Oreille," May, 1896.

A MINUTE and careful account of a case, a woman of sixty-seven, who died within seven days of the onset. The symptoms commenced with slight shivering, coryza, and bronchitis, resembling a gastric attack accompanied with bronchitis or an influenza of bronchial type. Cough, expectoration, aphonia, increased fever, painful respiration followed quickly. The larynx was covered with thick exudation, disseminated and in large blocks; pseudo-membrane occurred over the base of the tongue, tonsils, uvula, a large part of the soft palate, and anterior pillars of the fauces. This exudation was adherent, and could only be separated leaving the subjacent tissue bleeding and ulcerated; the mucous membrane was everywhere swollen and slightly red. The exudation, stained with gentian violet and Gram's method, revealed only staphylococci. These exudations increased, along with impediment to respiration, until death occurred. The urine was albuminous. A searching *post-mortem* examination was made. It was discovered that the retro-nasal cavity and posterior pituitary mucous membrane were covered with pseudo-membrane. The false membrane occupied the whole tracheo-bronchial tract as far as the third large division of the bronchi: the membrane at places was at least two millimètres thick. In spots where the membrane had disappeared the mucosa underneath was ulcerated. Serum cultures furnished only absolutely pure staphylococcus. Pathologically, the localization of the lesions to the upper respiratory and digestive tracts is an interesting point. Nothing was known as to the etiology, except that the patient had had an influenza a few days before the attack. The case is extremely interesting, as showing a purely staphylococcal invasion.

R. Norris Wolfenden.

Kemenyffy.—*Trachea following Intubation.* "Pester Med. Chir. Presse," 1896, No. 7.

(1) THIRTEEN-MONTH-OLD child, intubated for diphtheria, improved rapidly under serum treatment. Some days later the stenosis reappeared, followed by pneumonia and subcutaneous emphysema. Death. The *post-mortem* examination revealed membranous laryngitis, decubitus of the trachea, and an abscess of the right lobe of the thyroid gland. (2) In a nine-months-old child, intubated for diphtheria, an abscess of the right half of the thyroid gland arose; this was incised, and cure resulted.

Michael.

Koschier (Wien).—*Combination of Tuberculosis and Sclerema in the Larynx.* "Wiener Klin. Woch.," 1896, No. 42.

A PATIENT, fifty-three years old, was healthy ten years ago; then he caught cold, became hoarse, and, later, dyspnoic. In 1894 examination showed infiltration of

both lungs and tubercle bacilli. The nose was filled with greenish secretion, and the naso-pharynx infiltrated; the epiglottis was thickened; the vocal bands were red and covered with granulations; the subcordal mucous membrane swollen and produced stenosis. The treatment was by Stoerk's laryngeal tubes. In 1895 a similar state was found, but complicated with ulcerations on the arytenoid cartilages. Ulceration is never found in cases of scleroma; therefore it was believed that the arytenoid affection was tuberculosis. The patient deteriorated: especially was dyspnoea increased, so that tracheotomy was performed, but the patient died the next day. The *post-mortem* examination of the larynx and pharynx confirmed the diagnosis of laryngeal and pharyngeal scleroma, complicated by tuberculosis of the arytenoid cartilages and of the lungs. *Michael.*

Lohrstorfer, F.—*Laryngeal Papilloma in a Child; Repeated Intubation; Death.* "Med. Record," Oct. 10, 1896.

THE child, aged three, began to have some difficulty in breathing, which at first was attributed to asthma. This gradually grew worse, and when first seen by the author the child was in a condition of dyspnoea like that of acute diphtheritic stenosis. Examination was unsatisfactory: intubation was done, and had to be twice repeated. The third tube was left in three weeks, then removed under chloroform. Extreme dyspnoea at once came on, requiring tracheotomy. Next day the child died during an attack of dyspnoea.

Post mortem.—There was found a broad-based papilloma entirely encircling the interior of the larynx at the level of the cords, and producing complete obstruction. In spite of the last tube having been worn for three weeks, there was not the slightest trace of irritation of larynx or trachea. *A. J. Hutchison.*

Raugé, P. (Challes).—Abstract of Paper read at Congress of Surgery, Paris, Oct., 1896.

THIS series of clinical observations unites, etiologically, almost all the varieties of cervical tumours capable of causing compression of the recurrents and the laryngo-motor disturbances which are the mechanical result. From a pathogenic point, the ten personal observations which are embodied in this *mémoire* are thus divided: five cases of thyroid tumour, two of cervical adenopathy, one of cancer of the œsophagus, one of cervical caries, one of aneurism of the aorta. In nine cases the paralysis affected one vocal cord only, five times the left, and four the right; in one, both cords were affected in the case of cancer of the œsophagus. In six cases the vocal cord was in the cadaveric position (complete paralysis); more rarely, in complete adduction four times. In the single case of bilateral paralysis, the cords were both abducted. The symptoms usually accorded with the amount of deformity as seen by the laryngoscope. The cases in which the paralyzed cord occupied the cadaveric position, proved the more often to cause vocal disturbance, and respiratory troubles did not usually exist in cases of permanent adduction. The author observed, in conclusion, that the absence of disphonia in the last category is apt to fail to draw attention to the vocal apparatus, and therefore it is always advisable to hazard a laryngoscopic examination in such cases, and not to invariably suspect the larynx alone in dyspnoeic troubles.

R. Lake.

Terrier, Prof. Felix.—*Extirpation of the Larynx.* "Arch. Int. Lar., d'Otol., et de Rhin.," July-August.

THE author commences his lecture with a *résumé* of the history of the operation, and describes in detail the various classical methods employed, which it is unnecessary to repeat here. In dealing with the operation preceded by a preliminary tracheotomy,

he takes exception to the tampon canula as an instrument difficult of sterilization and causing great discomfort to the patient; moreover, it allows of the accumulation of a considerable amount of blood in the space above it. He, therefore, considers it desirable to dispense with the preliminary tracheotomy, and proceeds to describe the operation as performed by Perrier in 1890, with the aid of Collins' canula, which fits like a cork into the truncated trachea. At the termination of the operation the tracheal orifice is stitched to the lower end of the vertical skin incision, the rest of which, with the exception of an opening at its upper end for the passage of an œsophageal tube, is immediately closed by suture. The author points out that, in spite of the fixation of the tracheal opening, some canula is necessary, as the mucous membrane swells after the operation and might embarrass respiration. The author considers it desirable to remove the whole of the cricoid, as the operation is thereby simplified, and as deglutition is apt to be difficult when the unyielding ring is preserved. He is not satisfied with any of the artificial larynges so far devised. The statistics collected by Schwartz (1886) and Pinçonnat (1890) are given, the immediate mortality in each case being about twelve per cent. for total extirpations. With the advance of antiseptic dressing, pulmonary complications arising during the first fifteen days fell from thirty-six per cent. to twelve per cent. between 1886 and 1890. The total mortality in both sets of figures is about forty-one per cent. for total, and thirty-six per cent. for partial, extirpation.

Ernest Waggett.

Turner, A. Jefferis (Brisbane).—*Foreign Body in the Air Passages.* "Australian Med. Gaz.," May 20, 1896.

AN infant, aged ten months, while crawling on the floor, was seized with a violent fit of coughing and choking, as if something had been swallowed. Nine hours later another violent choking fit set in suddenly. After the breathing improved the child was sent to the hospital.

The author saw the patient the same evening, and found her sleeping quietly and breathing easily, but with distinct inspiratory stridor. When disturbed, the child's cry was loud and quite unmuffled, showing that there was no swelling of the vocal cords: the stridor, however, became more distinct both with inspiration and expiration. There was no distress in breathing, no recession, and both sides of the chest expanded well and equally.

The infant was inverted, shaken, and slapped on the back, without producing any change in its condition. The trachea was therefore opened and a probe passed upwards into the larynx, where a hard, gritty, foreign body was at once encountered. Attempts to remove it with forceps failed. The wound consequently was enlarged, a small bougie passed from above through the glottis, and the foreign body pushed down to the wound, through which it was readily removed. It proved to be an irregularly-shaped piece of coal cinder, three-eighths of an inch in its longest axis, but very light, and thus capable of being drawn into the larynx by a sudden inspiration. The tracheotomy tube was removed on the second day, and the child was discharged from the hospital on the fourth day.

A. B. Kelly.

THYROID.

Branca and Menier.—*A Case of Epithelial Tumour of the Thyroid Gland, causing Death from Asphyxia.* "Ann. des Mal. de l'Oreille," May, 1896.

THE symptoms pointed to retro-sternal compression of the trachea, probably by an aberrant goitre, the patient having five years previously had a thyroidectomy.

Operation was considered to be useless. At the autopsy a hard mass was found around the upper portion of the trachea, involving the œsophagus and cervical vessels on the right side, and infiltrating the trachea; as a certain surgical portion of the trachea was free from growth, a low tracheotomy could have been performed. Had this been done the patient might have been relieved from the intense suffering of progressive asphyxia which ended in death.

R. Norris Wolfenden.

Clark, Alfred.—*A Case of Absence of the Thymus Gland in an Infant.* "Lancet," Oct. 17, 1896.

THE child at birth was apparently well nourished and healthy, and continued to be so until six months old, in spite of being fed from a dirty bottle and otherwise neglected. About the sixth month swelling and coldness began in the hands and feet, and spread to the legs. The child was then found to be considerably swollen, and waxy in complexion; the heart and lung sounds were normal. There was no cyanosis; the fundi oculorum were normal; the bowels relaxed; the urine acid and without albumen. The swelling increased, and spread in spite of treatment, until the eyes were almost closed, and the limbs so distended with fluid as to feel like firmly stuffed cushions. Ecchymoses appeared in each supra-clavicular fossa, and the child died at the age of nine months. At the necropsy it was found that the thymus gland was entirely absent, and the position of the absent organ was not even marked by fibrous tissue. The case shows that absence of the thymus gland is compatible with fair health and normal development—at all events, for the first six months of life. There were no symptoms of acromegaly. The appetite remained good to the last.

StClair Thomson.

Koeppé (Giessen).—*Sudden Death of a Healthy Child.* "Münchener Med. Woch.," 1896, No. 39.

AFTER the sudden death of a child the *post-mortem* examination showed hypertrophy of the thymus gland. The author found forty cases in literature in which sudden death of healthy children was caused by this anomaly.

Michael.

Reinbach (Breslau).—*Results of Thymus Feeding in Goitre.* "Grenzgebiete von Med. und Chir.," Bd. 1, Heft 1.

IN thirty cases of goitre the thymus feeding was tried. The dose was twenty to thirty grammes of the gland three times a week, or tabloids of Burroughs, Wellcome, & Co. were used. In parenchymatous goitres in young persons good results are obtained, but in cases of myxœdema the thymus had no effect.

Michael.

E A R.

Alderton, H. A. (Brooklyn).—*The Operation of Mastoid Antrotomy for the Cure of Obstinate Purulent Median Otitis, with Description and Presentation of the Author's Anthrotome.* "Arch. of Otol.," July, 1896.

THE author has a great belief in the efficacy of drainage of the mastoid antrum in the cases described, and he recommends the use of a guarded perforator for making an opening into the antrum from outside. As he very truly observes, the bone on the exterior has a strong tendency to become densely sclerosed and thickened, while, unfortunately, no such process takes place in the inner boundaries of the cavity, but, on the contrary, more usually a rarefaction, so that the contained matter is

likely to find its way towards the brain, lateral sinus, etc., rather than towards the exterior. The prolonged and energetic chiselling required in the typical operation is, of course, a regrettable necessity, and he has devised a drill with a guard or guide attached to it, the latter being introduced through the meatus (after detachment of the auricle) into the antrum through the aditus. In this way he perforates straight down into the antrum and on to the guide. A shouldered silver drainage tube is introduced into the opening, and thorough cleansing and healing solutions are introduced. The guide has an inner rod which can be projected through the aditus by means of a lever. [This instrument is probably the most ingenious attempt at the realization of an ideal which most operators must have conceived, and in the typical anatomical condition would probably be entirely satisfactory. At the same time most operators have met with cases in which the middle fossæ of the skull, or the groove for the lateral sinus, or both, project so much that the use of a drill thus worked in the dark is fraught with danger and uncertainty. It would be interesting to know on how many skulls, whether living or dead, the instrument has been employed.—ED.]

Dundas Grant.

Bacon, Gorham.—*A Case of Acute Otitis Media, followed by an Abscess in the Temporo-Sphenoidal Lobe. Operation. Death from Shock. Autopsy.* "Arch. of Otol.," July, 1896.

THE patient was a young man who had had no ear disease previous to the last eight weeks, when he became affected with acute suppuration in the left attic, the pus from which was evacuated by incision on several occasions with considerable relief. There was more or less persistent headache, and for the last three weeks loss of memory for objects and names of friends had been noted, but memory for events was good. His headache was severe, temperature 98.8, pulse full and slow, 56, respiration 16. Constipation was present. Brain abscess was suspected, but it was considered best to postpone exploration, the mastoid antrum being, however, opened without delay. This was found to contain granulations and a small amount of pus; no sinus in the roof of the middle ear could be discovered. The patient improved to some extent, but in about a week he had some mental disturbance, attacks of vomiting, and increased aphasia. The temperature had generally ranged from 97.8 to 99.6, but on the day when it was decided to operate the temperature was 100.6. A trephine hole was made with its centre 2.5 centimètres above the external auditory canal. An aspirating needle was introduced in different directions, but without result. The opening was then enlarged, and the needle was introduced in a direction backwards, inwards, and upwards, for three centimètres, when pus escaped. There was a fairly large abscess cavity without lining membrane. Half an ounce of pus was evacuated. About two hours later the patient died, apparently from shock. On a *post-mortem* examination, the outer third of the superior surface of the left petrous bone was discoloured, and presented a small opening communicating with the attic. Over this there was an aperture communicating with the brain, and an abscess in the posterior half of the third temporo-sphenoidal convolution, while the brain substance beneath the cortex behind the whole of the lower part of the temporo-sphenoidal lobe was found softened and streaked with blood. A reddish mass lying in the centre proved to be the capsule of an abscess which had probably ruptured. The writer points out the advisability in such cases of exposing the roof of the tympanum from the middle fossa at the time of the antral operation.

Dundas Grant.

Cheatle, A. H. (London).—*The "Mastoid" Antrum: a Part of the Middle Ear.* MR. CHEATLE pleads once more for the abolition of the term "mastoid" antrum, contending that the division of the petro-mastoid bone into the petrous and

the mastoid is (as all will agree with him) perfectly artificial. He advises the adoption of the excellent term, "tympanic antrum." [The abstractor recommended this in a comment on a paper in the "Lancet" of Dec. 3, 1892, in which Mr. Cheatle suggested the term "tympanic receptaculum" (*vide JOURNAL OF LARYNGOLOGY*, 1893, p. 105).] Mr. Cheatle illustrates his paper by some sketches, which support his contention very strongly. *Dundas Grant.*

Clark, L. Pierce.—*Prognosis of Insanity complicated by Hæmatoma Aurum.* "American Med. Surg. Bull.," Aug. 22, 1896.

A SHORT paper, first showing that this complication of insanity almost always implies a very grave prognosis. In the literature of the subject the author could find only five authentic cases in which recovery from insanity occurred when hæmatoma aurum was present. He then reports one case in which non-traumatic hæmatoma occurred in a man suffering from acute melancholia. He gradually recovered, and remained well five years later. *A. J. Hutchison.*

Denker, Alfred (Hagen).—*A Case of Otitic Sinus-Phlebitis and Metastatic Purulent Pleurisy cured by Operation.* "Monats. für Ohrenheilk.," Sept., 1896.

IN this case there had been an old-standing otorrhœa, which suddenly ceased, and the cessation was followed by rise of temperature, mental obfuscation, inactivity of the pupils, headache, and mastoid tenderness. The mastoid was opened, and was found to be deeply sclerosed, with a small antrum containing cheesy pus and granulation tissue. A careful search revealed an opening leading backwards from the cavity. Suspecting that infection of the sigmoid sinus might be the cause of the constitutional disturbance, this was exposed for an inch of its length, and found to be of a greyish colour, thickened, and non-pulsating. It was then slit up, and found to contain a firm, cheesy clot. "In order not to loosen any portion of it" the operator introduced with care a strip of iodoform gauze, and applied an antiseptic dressing. The patient improved for several days, when cough came on, and dulness on percussion was elicited, without marked bronchial breathing, extending from the spine of the left scapula downwards. The sensorium was clear, but the temperature rose to nearly 104° F., and puncture of the pleura confirmed the diagnosis of empyema. Resection of the sixth rib in the anterior axillary line permitted of the evacuation of more than a litre of fetid pus. With slight fluctuations speedy recovery followed. The writer adds this to the other eighty cases already published, of which about one-half recovered. *Dundas Grant.*

Donaldson, E.—*Movement of the Membrana Tympani with Respiration.* "Lancet," Oct. 10, 1896.

FINDING no reference to this subject in the text books the following case is recorded:—A woman, aged twenty-five years, complained that her left ear had now and then during two months felt as if stuffed with cotton-wool. Her voice seemed not to "escape through her left ear" when the full feeling was present. She could hear a watch at forty inches. There was no tinnitus. On examination a small part of the membrana tympani, in the region of Wilde's spot, moved in and out, keeping time with respiration. The movement occurred only during nasal respiration, and stopped when she breathed through the mouth. Eleven days after her first visit she said that the sensation as if her ear was "stuffed" was gone for the present, and on examination no movement of the membrane was found during respiration. From this it is concluded that (1) the whole of the membrana tympani, or a part of it, may move during respiration through the nose: (2) the

movement may be present one day and absent the next; and (3) it occurs when the Eustachian tube is unduly open, patulous, and when the membrane is in part or wholly atrophic and flaccid.

StClair Thomson.

Fridenbergh, Percy H. (New York).—*Hygienic Principles in the Prevention of Ear Disease.* "Med. News," Aug. 8, 1896.

THE article first refers to the destruction of micro-organisms, pathogenic and otherwise, in the healthy naso-pharynx, by phagocytosis, mutual antagonism, etc., and goes on to point out that the commonest path of aural infection is through the Eustachian tube opening into the naso-pharynx, and insists on proper antisepsis of the mouth, throat, etc., by means of gargles, mouth washes, sprays, etc., especially when any morbid change is taking place. The author draws attention to the importance of removing any possible nidus for pathogenic organisms, such as diseased tonsils, decayed teeth, etc., and concludes by enumerating the various applications he has found of service in the treatment of aural inflammations.

StGeorge Reid.

Kenefick, Thos. A.—*Ménière's Disease.* "Med. Record," July 25, 1896.

MR. J., about forty-five years of age, robust and healthy in appearance, by profession an architect, had lived a regular, sober, but very hard working life. No history of syphilis or other disease. He was awakened up one night by an attack of violent vomiting, accompanied by persistent giddiness, and by noises and marked deafness in the right ear. Examined next morning he was found in excellent general condition, right membrana tympani slightly congested. Vomiting and dizziness continued some hours, then ceased, but were renewed by every attempt to sit up or to turn. Finally vomiting yielded to small doses of ipecac., but deafness and giddiness persisted. There were also present several symptoms of perverted vision. He saw by his bedside the slanting roof of a conservatory on which sat a glazier rapidly fitting in panes of glass, which as rapidly fell through. In the afternoon this scene was replaced by the figure of a woman dressed in brilliant red. At first small, the figure gradually increased to about one hundred feet high, and was surrounded by multitudes of active little mice. These disturbances vanished towards evening, and but for the dizziness patient seemed quite comfortable. The vomiting ceased. In about two weeks the deafness and giddiness began to improve, and in six weeks patient was able, with the help of a friend, to reach his office. Treatment at first was by large doses of quinine, and later iodide and bromide of potash, but with no marked results. Galvanism seemed to be beneficial. Recovery was complete.

A. J. Hutchison.

Lake, R. (London).—*A New Method of dealing with the External Meatus in Operations on the Mastoid.* "Arch. of Otol.," July, 1896.

THE chief novelty in this method is the ingenious idea of removing the cartilage of the posterior half of the cylinder of the meatus, thereby depriving it of its resilience, and preserving the skin of that half of the meatus with which to make a flap to cover the floor of the artificial cavity.

Dundas Grant.

Lannois.—*Acute Catarrhal Median Otitis and Murebes.* "Ann. des Mal. de l'Oreille," June, 1896.

WHILE many observers have discovered various micro-organisms in secretion of acute catarrhal otitis, Scheibe, of Munich, has made numerous bacteriological studies upon median otitis, with the result that he found no micro-organisms present. Lannois has thought, in these contradictions, that new researches would be of interest. He has made cultures twelve times with the liquid drawn from

six patients suffering from catarrhal median otitis. Five times the cultures were fertile, and seven times sterile. How can these contradictory results be explained? If the middle ear encloses microbes in its normal condition, their occurrence in secretions of catarrhal otitis would lose all importance. He refers to his previous work, which shows that the middle ear is a closed cavity and aseptic. In an acute coryza or an angina, pathogenic microbes enter the tympanum in too great a number to be destroyed. They determine an inflammation with exudation, and the more easily as the same bacterial invasion has irritated the Eustachian tube, and led to its more or less complete obstruction. There is a veritable otitis, and not merely a simple effusion *ex vacuo*, and if a culture is made after paracentesis it is sure to reveal various staphylococci, streptococci, etc. But if the organism is resistant, if the bactericidal action of the secretion is exerted on the invading microbes, or if these are but little active, the pathogenic agents disappear after a few days, and cultures remain sterile. This view is supported by the author's experiments, cultures being positive when the paracentesis was made at the commencement of the affection, and negative at a later period; and it also explains why, when the catarrhal effusion is not absorbed, it may persist without change for weeks or months; why patients may be catheterized with impunity, even in the vitiated air of consultation rooms; and why paracentesis, even without proper antiseptic precaution, so seldom leads to purulent transformation. We cannot establish any pathogenic difference between acute catarrhal and acute purulent otitis; the same microbes determine both conditions, and it is merely a question of resistance of the organism.

R. Norris Wolfenden.

Lannois.—*The Normal Middle Ear and Microbes.* "Ann. des Mal. de l'Oreille et du Lar.," May, 1896.

THE author has made bacteriological experiments upon dogs and rabbits. These naturally cannot be conducted upon the living human subject, and upon the cadaver would be useless. The experiments were conducted with every possible precaution; and six tubes inoculated from two dogs gave no cultures. Eleven similar tubes inoculated from rabbits remained absolutely sterile. There are, therefore, no microbes in the middle ear, and analogy would lead to the same conclusion with regard to the human subject. The reasons for this asepsis are found in the action of the nasal cavities in arresting and destroying microbes; possibly the tympanic mucous membrane enjoys the same properties.

R. Norris Wolfenden.

Lautenbach, Louis J. (Philadelphia).—*Phono and Pneumo-Massage in Suppurative Disease of the Ear.* "The Med. and Surg. Reporter," July 18, 1896.

IN otorrhoea, wet cleansing serves to wash out most of the discharge, but allows some, together with the residual liquid, to remain. This diluted discharge is probably more irritating than the original, and excites increased secretion and inflammatory action. Dry cleansing, as usually pursued, can never remove all the suppuration, as the middle-ear cavity cannot be thoroughly reached in this manner.

To remove these discharges the author uses his pneumo-massage instruments (which are not described here), together with wet or dry cleansing. He first treats the ear according to the present methods, and when he considers it fairly clean he uses an exhaust apparatus, with a pressure of from two ounces to four pounds per square inch, for from three to ten minutes, employing about 300 exhausts per minute. He then thoroughly cleanses the ear with cotton, and if suspicious of suppuration being still present he again applies the exhaust pump. After thus cleansing the ear he uses drying and stimulating preparations in the usual manner. Often in simple cases, after cleansing the ear, he lightly plugs with cotton, and uses no other treatment.

By this massage method he often succeeds in reducing the infiltration and inflammation, and, when used daily, in preventing the formation of bands and adhesions. Further, the procedure may be employed to break up ankyloses, stretch and cause absorption of bands, rupture adhesions, reduce thickenings and growths of the mucous membrane, and relieve pressure on the internal ear.

Phono-massage is used to stimulate the internal ear when from either pressure or disease its nerve endings are unresponsive.

A. B. Kelly.

Milligan, W. (Manchester).—*Two Cases of Sarcoma of the Middle Ear.* "Arch. of Otol.," July, 1896.

THE first case was that of a female, aged sixty-three, in whose external meatus there was a fleshy-looking growth of uncertain duration, with frequent attacks of spontaneous hemorrhage. There was extensive caries of the surrounding bone, facial paralysis, and absence of sense of taste on the side of the tongue. A small portion was removed for microscopical examination, which showed it to be an angio-sarcoma. There was considerable hemorrhage, only arrested by means of the galvano-cautery point. The second case was that of a girl, aged eighteen, who had from earliest infancy suffered from suppuration from the middle ear. The meatus was blocked by a fleshy-looking substance, there was deep-seated caries, and the tissues over the mastoid process and in front of the meatus were puffy and cedematous. The removal of as much of the growth as possible was carried out under chloroform after detachment of the auricle, but it was found to arise from the inner wall of the tympanum, and recurrence, as was expected, subsequently took place. The growth was a fairly vascular myxo-sarcoma. Excellent microscopical illustrations are appended.

Dundas Grant.

Milligan, W. (Manchester).—*A Case of Temporo-Sphenoidal Abscess secondary to Acute Left-sided Suppurative Middle Ear Disease; Operation; Acute Hernia Cerebri; Death.* "Arch. of Otol.," July, 1896.

DR. MILLIGAN was called in after treatment had been carried out for three months in vain, for the relief of pain following an acute median otitis. He found in addition to the pain great mental apathy, marked sensory and slight motor aphasia, ptosis, left-sided mydriasis, and facial paralysis, temperature 98° 8' F., and pulse 66. Trephining was performed, and a temporo-sphenoidal abscess found and evacuated. The patient gradually improved for about six weeks, when hernia cerebri appeared, and, in spite of exploration, death took place from basal meningitis. There was no erosion of the tegmen, and no suppuration in the mastoid cavities. Extension appears to have been by the lymphatics.

Dundas Grant.

Ostmann (Marburg).—*On Simulation of Deafness and Failure to Recognize Diseased Condition of the Hearing Apparatus.* "Monats. für Ohrenheilk.," Sept., 1896.

THE writer considers that there is no "instrument" of value in the diagnosis of simulated deafness to compare with a complete knowledge of diseased conditions of the hearing organs, and that without this all the recognized classical methods may lead to error and injustice. In his experience (twelve years) as a military surgeon he has found genuine simulation to be extremely rare. He points out the danger of being misled into a diagnosis of simulation if our tests give an unexpected or unusual result. Thus, he quotes the case of a man who received a blow rupturing the membrane, and as the result of injudicious syringing had a suppurative otitis. In this case the patient asserted that the vibratory tuning-fork on the vertex was heard in the uninjured ear. This unexpected result of Weber's test

might be ascribed by the examiner to intentional misstatement on the part of the patient, especially if the latter was a soldier and the examiner was suspicious of malingering. In reality, in the case quoted, the inflammatory disturbance had affected the internal ear, and the further use of his otological knowledge enabled the writer to verify the truthfulness of the man's statements. Again he warns us against confusing intentional simulation and a form of unintentional simulation, as when an individual with traumatic rupture of the membrane has the conviction that with such an injury he cannot and never will be able to hear. (We might almost describe this as auto-suggestion). To put the patient down as a malingerer, to be punished instead of being encouraged by the cheering assurances of eventual restoration, would be unjust and erroneous. The writer insists on the danger of a bias towards the diagnosis of simulation, and on the need for knowledge of mankind, and experience. A minute acquaintance with otological diagnosis ranks above all other means for the detection of simulation.

Dundas Grant.

Pooley, Thomas R.—*On the Value of the Ophthalmoscope as an Aid to the Diagnosis of Cerebral Disease in Purulent Affections of the Middle Ear.* "Med. Record," Aug. 15, 1896.

THIS paper commences with the quotation of three cases reported by Dr. Andrews in 1883, in which the great value of the ophthalmoscope as an aid to diagnosis in such cases was demonstrated. The summaries of these three cases are :

1. Otitis med. purul. chronic. ; abscess of middle lobe of cerebrum ; double optic neuritis ; death.
2. Otitis med. purul. chronic. ; optic neuritis ; phlebitis of right lateral sinus ; meningitis of convexity ; death.
3. Otitis med. purul. chronic. ; meningitis ; optic neuritis ; recovery.

Next is quoted the report of a case by J. Kipp. Otitis med. purul. *acuta* ; double optic neuritis ; no swelling or spontaneous pain in mastoid ; opening of mastoid cells by Schwartze's method ; rapid subsidence of optic neuritis ; recovery.

The author then reports his own case. Patient aged twelve ; had *otorrhœa* for years, Wilde's incision having been performed six years ago. On admission, pain and swelling over mastoid ; slight discharge of pus from external canal ; high temperature. Wilde's incision performed : temperature fell and pain disappeared. Next day, rise of temperature and return of pain. Schwartze's mastoid operation performed : pus, granulations, etc., removed ; a considerable amount of dura exposed. As the discharge from the external auditory canal was slight, the *membrana tympani* was perforated ; this was followed by the onset of chills, with high temperature, 104.5° F. Later came severe pains in head, contracted pupils, choked disc (left side). Still later complete blindness of right eye ; ophthalmoscopic examination at first *nil*, but afterwards slight venous hyperemia (right) and violent choked disc (left). Two days thereafter paralysis of right side ; coma lasting about twenty-four hours ; death. The autopsy revealed abscess in left occipital lobe, extensive sinus thrombosis of the left side, and widespread stinking purulent meningitis.

The author thinks that otologists do not pay sufficient attention to the eyes. The condition of the fundus often confirms a diagnosis of intracranial disease arrived at from other symptoms, and sometimes is the only symptom. If optic neuritis is found, the diagnosis of extension to the brain is certain, no matter whether other evidence exists or not. In the same way, if, after operation, the optic neuritis diminishes and disappears, one knows that the intracranial complication is doing likewise. Unfortunately optic neuritis aids neither in locating the intracranial disease nor in diagnosing its nature ; it may be present in abscess of cerebrum, in

abscess of cerebellum, in meningitis, and in thrombosis. Marked optic neuritis alone occurring in a case of chronic otorrhœa is sufficient indication for opening the mastoid; and even when there is only slight œdema of the optic disc, the author thinks, with Andrews, that the mastoid operation should be performed. The existence of optic neuritis as an indication for an exploratory opening into the cranial cavity can be considered only in connection with other symptoms. "So far as it goes, however, it serves to make the presence of intracranial disease "more certain."

A. J. Hutchison.

REVIEWS.

Schrötter.—*Vorlesungen über die Krankheiten der Luftröhre.* ("Lectures on the Diseases of the Trachea.") By Prof. SCHRÖTTER, of Vienna. With fifty-three illustrations. 1896. Wilhelm Braumüller, Vienna and Leipzig.

THIS book, consisting of 195 pages, contains seventeen lectures on the diseases of the trachea and bronchi. It forms the second volume of Prof. Schrötter's lectures, the first being his well-known systematic work on the diseases of the larynx, of which the second edition appeared in 1893.

The first lecture deals with the anatomy and the known congenital malformations of the trachea; the second describes minutely the best mode of performing tracheoscopy, very much as has been done by Türk and by Morell Mackenzie, though, perhaps, less frequently put into intentional practice by laryngoscopists in general. The perusal of this work may lead to a beneficial change in this respect. Great stress is laid on the necessity in all cases for the straightening of the spinal column during the examination, and, in some, for rotation of the head on the trunk through an angle of 90 degrees. The writer gives a reserved opinion with regard to Kirstein's method of autoscopia, of which he recommends further use, while strongly convinced, as Kirstein himself frankly admits, that it can never take the place of the reflected light as usually employed. The various diseased conditions which the trachea presents are then individually described, including anemia, hyperamia, hæmorrhage, acute inflammation, chronic inflammation (with occasional distension of glands or of atrophied portions of the tracheal wall); also the various inflammations accompanying specific infective diseases—tuberculosis, lupus, leprosy, scleroma, syphilis, and others. The description of the bridges of mucous membrane left over the undermining syphilitic ulcers, and the symptoms produced by the entanglement of collections of secretion under these, are graphically described. Injuries and foreign bodies form the subject of another lecture. Prominence is given to the reduction in the mortality of cases of foreign bodies in the trachea from 41·2 per cent. before 1886 to 30 per cent. after this date, namely, the time of the introduction of laryngoscopy.

A very large amount of space (pages 96 to 145) is naturally devoted to the subject of tracheal stenosis, which is treated of in three lectures. The

cases of stenosis are classified, according as they arise from without, from disease of the walls, or from intra-tracheal conditions. The mechanism of tracheal stenosis as produced by bronchoceles, both from direct pressure and from atrophy of the cartilaginous rings, is interestingly described. Curiously enough, in this very exhaustive list dislocation of the sternal end of the clavicle backwards is omitted, a somewhat sensational example of which is recorded in all our English classical works on general surgery. In this article (page 107) some of the difficulties connected with the removal of the canula after tracheotomy are described; in particular, granulations and decubital ulcerations. Symptoms of tracheal stenosis form a chapter of the utmost importance, which no writer on or teacher of practical medicine should omit to read. The description of the sound characteristic of tracheal stenosis is admirably given, though it seems to us that it is not so well known to general practitioners as it ought to be. Morell Mackenzie states that it is so characteristic that when once heard it can never be forgotten, and cites the instance of a nurse who was able to diagnose the condition, through having once had such a case under her observation. Prof. Schrötter expresses the opinion (page 116) that Gerhardt's statement that excursions of the larynx do not take place in pure tracheal stenosis, although correct in many instances, is by no means so in all. Furthermore he finds the same writer's statement that in tracheal stenosis the head is kept inclining backwards also unsupported by his experience. Further details and illustrations of the tracheoscopic image in such cases are given. Transillumination is recommended in thin necks, and the possibility of great assistance from the Röntgen method of photography is also freely admitted. In the light of the demonstration given by Dr. Macintyre before the British Laryngological Association, and detailed at the time in this journal, our readers will be quite prepared to see this hope fulfilled. To these methods Prof. Schrötter adds that of probing by means of a suitably curved sound, and also by a plastic (Modellir) bougie coated at its lower extremity with a combination of wax and turpentine. This is pushed down into the stricture, and a cast of its interior is thus obtained, which is fixed by its being plunged into cold water. Naturally, this method is not intended for the million, and even the specialist will introduce it into his practice with some sense of responsibility. Prof. Schrötter gives examples of its value, and others will have to keep it before their minds.

There is an admirable chapter on new growths in the trachea, and a description of the instruments by which certain of them may be removed, either through the natural opening or through a tracheotomy wound.

The book is full of practical hints, and generous appreciation is expressed of the works of others, their results being criticized temperately, and the opinions of their value, though sometimes not so dogmatic as many would wish, giving evidence of an anxious desire to elicit the truth rather than to establish preconceived principles. To Dr. Luc is accorded the credit of recognizing the condition of tracheal ozæna, but the writer is not disposed to consider that it can ever occur as a primary affection (page 31). With regard to antitoxin in tracheal diphtheria, he advises an expectant attitude, and recommends tracheotomy rather than intuba-

tion, it being, of course, understood that this is not meant to apply to pure laryngeal diphtheria (page 38). Disease of the bronchial glands, as a cause of paralysis of the recurrent nerve, he considers, in contradiction to many writers, to be one of the most extremely infrequent occurrences (page 65), and very much rarer than gummatous or ulcerative processes in the trachea. A rare case of pyæmic cerebral abscess, resulting from the presence of a foreign body in a bronchus, is quoted from Sander (page 76). In cases of foreign bodies he strongly insists upon the danger of the administration of emetics (page 86), and formulates (pages 85 and 87) very intelligible general rules for adoption in cases in which the presence of a foreign body in the trachea or bronchi is suspected.

We cannot too strongly recommend the perusal of this work to all specialists in diseases of the air passages; and as we before said, there is a great deal which demands the earnest study of all teachers of practical medicine, because, although the book is hardly likely to be widely read by general practitioners, there is a great deal in it which it is necessary that they should know, and which might, very advisably, be incorporated in lectures on the respiratory organs. The bibliography of the subject is of an astonishing extent, and will be invaluable to anyone desirous of following up the subject if, indeed, there remains much more than Prof. Schrötter has done in this classical work.

Dundas Grant.

Ostmann, Prof. D.—*Gemeinverständliche Anweisung zur Heilung der Eiterung des Ohres.* ("Popular Instructions for the Curative Treatment of Suppuration in the Ear.") By Prof. D. OSTMANN, Director de K. Universitäts Poliklinik für Ohren, Nasen, und Halskranke zu Marburg. Leipzig: F. C. W. Vogel. 1896.

ALL those who have had any experience in the treatment of suppuration of the middle ear in poor or out-patient hospital practice, must have felt a keen disappointment at the frequency with which their best endeavours have been frustrated by the imperfect, and often deleterious, way in which their instructions for home treatment have been carried out. To mitigate this as much as possible, the author has drawn up in the clearest way the instructions necessary for the "other person" who is to carry out the cleansing, syringing, instillation of drops, and dressing at home, it being, of course, recognized at once that they cannot possibly be carried out by the patient himself. The instructions are drawn up in the form of full and explicit answers to the following questions: (1) How are the hands to be washed? (2) How is the outer ear, the auricle, to be purified? (3) How is the ear syringed out? (4) How is the ear washed out? (5) How is the ear dried out? (6) How is the ear closed after cleansing? (7) How is the syringing fluid prepared? (8) How are healing drops put into the ear? (9) How are ear forceps to be purified? (10) What other measures are of importance for the cure of a suppurating ear? These occupy nearly eight small pages of a short brochure, the reading of which cannot but suggest means of making clear to the lay assistant many apparently trivial points which are so self-evident to the aurist that he may feel it almost beneath his dignity to enlarge upon them, although much of his success in treatment may depend upon his doing so.

Dundas Grant.

Kelly, A. Brown.—*Mycosis Pharyngis Leptothricia and Keratosis Pharyngis.*
A. MacDougall, 68, Mitchell Street, Glasgow. 1896.

THESE are articles originally published in the "Glasgow Medical Journal," and are now issued in the form of a pamphlet, with an introduction in which the author states these papers are an additional proof of Siebermann's theory that the mycotic element is a secondary, and not a primary, condition; that keratosis is a better title than hyperkeratosis; and that a condition of mycosis does exist, but differs from that at present recognized as such. He describes, under the heading of course, the interesting fact that he has been able to verify the origin of the tufts, as described by Siebermann, of small white submucous spots, and also that if left to themselves they eventually disappear. And he also observes that whilst leptothrix is usually to be found in the lingual and faucial tufts, they are absent in the pharyngeal excrescences, thus proving conclusively its casual relation to the disease. A very admirable set of drawings from sections show the excessive horny growth of these tufts, and also one of the early stage.

As examples of true mycosis pharyngis leptothricia he quotes Semon's case and three of Michelson's, and others, in which a thick fur collects on the affected part and can be separated without bleeding, and which easily yields to local treatment. The author describes fully ten cases which have come under his own observation. R. Lake.

Wilkens.—*Ueber die Bedeutung der Durchleuchtung für die Diagnose der Kieferhöhlenentzündung.* ("The Value of Transillumination in the Diagnosis of Empyema of the Antrum Maxillare.") Thesis by JOHANNES ALBERTUS WILKENS.

THIS thesis is divided into six chapters, dealing with (1, History, (2) Technique, (3) Transillumination in Healthy People, (4) Cases in which it was used, (5) The Diagnostic Value of Transillumination, (6) Transillumination and Diagnostic Syringing. Then follow a short summary of the foregoing and a bibliography.

The author ascribes to Heryng the credit for being the first to recognize the real value of the method, and to point out that where empyema is present the lower eyelid remains dark, but is lighted up where the antrum is healthy. This symptom he therefore proposes to call Heryng's symptom. Similarly he proposes to call the illumination of the pupil the Vohsen-Davidsohn symptom; the subjective perception of light the Garel-Burger symptom; and the illumination of the lateral nasal wall and inferior turbinal the Robertson symptom. This may be very interesting from a historical point of view, but in practice is confusing.

In Chapter II. some details are given as to the kind of lamp and battery required. With a four-cell accumulator battery and an Urbantschitsch lamp Burger could illuminate the pupil in only fifty per cent. of his cases; whereas with a six-cell accumulator battery and a Hirschmann lamp Burger and the author could illuminate the pupil in seventy-four per cent. of their experiments. Much stress is laid on the necessity of having the room absolutely dark, of keeping the lamp under one's own control, and of alternately opening and closing the current. The last rule is of special importance in testing the subjective perception of light.

The author experimented on one hundred patients with presumably healthy antra, with the following results :—

Illumination of infra-orbital region good in 54 per cent., moderate or poor in 37 per cent., absent in at most 9 per cent. Illumination of pupils, 74 per cent. (Note.—There were examined 54 women, 21 children, 25 men.) Subjective perception of light was present in almost all cases.

The illumination of the nasal wall and inferior turbinal is not considered of much use.

Chapter IV. consists of a short description of twenty-four acute and twenty-one chronic cases of empyema, regarded from the transillumination point of view. They prove the value of transillumination not only as a means of diagnosis, but also as an indication of the cure or the recurrence of the disease. The latter points, however, are more fully dealt with in the following chapters. There the author points out the fact that the darkness on the diseased side is caused not by the pus alone, but by the hyperamia, infiltration, and thickening of the walls. Therefore, if for any reason there is no pus in the antrum at the time of examination, the diseased side still remains dark, and will not be lighted till up the disease is cured. Syringing, blowing through, or aspirating the cavity may give a negative result when first tried, and consequently have to be repeated before a conclusion is justified : and in some cases it is possible that by this process an antrum previously healthy may be infected. These proceedings, therefore, ought not to be resorted to except in cases where there are good grounds for suspecting the presence of empyema. On the other hand, transillumination can do no harm at all, and, if freely used, sometimes shows the presence of a quite unsuspected "latent" empyema.

The author, however, does not claim for transillumination absolute certainty, either positive or negative, but considers it a valuable aid to the diagnosis of empyema of the antrum.

Arthur J. Hutchison.

NEW INSTRUMENTS. ETC.

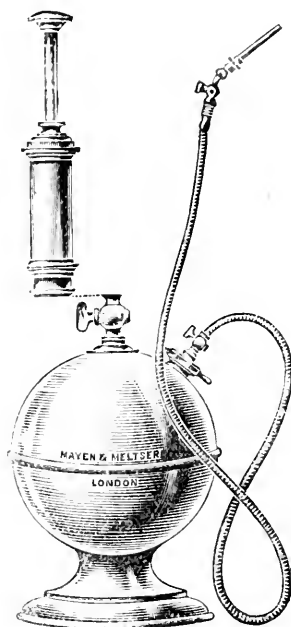
THE "SUN" POCKET STOVE. (D. Blair & Co., 4, Croydon Street, London, N.W.)

This little contrivance, which we have carefully tested for some time, fully answers its warranty; and we warmly recommend it to our readers. It is an elegant German silver ovoid case, into which is placed a lighted cylinder of patent fuel, which, in a very short time, heats the stove sufficiently to act as a delightful and efficient radiator; and one is not sorry to be able to suspend it by a safety pin and chain attached for the purpose. This little stove is not only a great personal comfort—to keep one's hands or back warm—but can have a respirator attached, so that warmed air can be inhaled; and the stove itself can be used for the local application of heat in neuralgia of any part of the body, or may supersede a mustard plaster to the throat or chest. The fuel is remarkably cheap: 2s. 6d. per hundred refills.

“WATER PRESSURE ACCUMULATOR”
CONTINUOUS SYRINGE.

(Meyer & Meltzer, 71, Great Portland Street, W.)

In our July issue it was stated that these accumulators, as they are called, were being adapted to our speciality. The figure shows the instrument complete. The reservoir holds about three pints of fluid, which is poured in by means of a funnel, the long tube being detached for the time. The air-pump is then screwed on at the top, as pointed out by the dotted line, and air is then pumped in until the resistance feels sufficient. The tube, which is a continuous armoured one, has at the distal end a control tap, which gives an exact control of the force of the stream, and a bayonet joint enables any form of nozzle to be used, the one depicted being an aural one. Tubes for irrigation of the nasal sinuses, Hartman's canula, etc., can all be used. If no fluid is put into the sphere it is converted into a compressed air apparatus. Sprays, nasal, etc., are supplied for use with it.



AN ANTISEPTIC INJECTOR. (Walter F. Chappell. "New York Med. Journ.,"
Sept. 26, 1896.)

This is an ingeniously contrived injector for the application of oleostearate of zinc to the nasal or other passages. The construction is such that the medicine employed cannot enter the rubber bulb which is attached to one end to expel it, being prevented from so doing by the formation of the glass bulb, which joins the stem in a manner somewhat similar to that employed in a safety ink bottle.

R. Lake.

ANABRUOSE PULMONAIRE. (Valdare, 63, Rue Pessac, Bordeaux.)

This is an ingenious little inhaler, formed like a cigar, with an artificial amber mouthpiece. The cigar is hollow, is filled with fine sawdust, saturated with an ethereal solution of benzoic, salicylic, and carbolic acids, menthol, and eucalyptol, and is meant to enable men to inhale the vapour without using a bulky and ugly respirator.

NEW PREPARATIONS, ETC.

CHINSOL. (B. Kühn, 36, St. Mary-at-Hill, London.)

A new antiseptic and disinfectant, in powder or tablets. It possesses a slight but pleasant aromatic scent; it is non-corrosive, non-toxic, and is possessed of remarkable germicidal properties. The development of *staphylococcus pyogenes aureus* is arrested by a solution of one in forty thousand. But perhaps its greatest value to

aurists and rhinologists lies in the fact that it does not coagulate albumen. As far as our experience goes, it appears an ideal antiseptic, and will occupy a first rank amongst the remedies used in our specialities.

(1) NASAL TABLETS: (2) EUTHYMOL; (3) TAKA-DIASTASE; (4) EXTRACT OF GOLDEN SEAL (colourless). (Parke, Davis, & Co., 21, North Audley Street, London; Detroit, New York, and Kansas City, U.S.A.)

(1) Nasal tablets. These handy tablets are another addition to the long list already in use, and will suit certain cases better than some of our older friends. They contain besides the four sodium salts—viz., bicarbonate, borate, benzoate, and salicylate—four vegetable antiseptics and deodorants: eucalyptol, thymol, menthol, and oil of wintergreen, and make an extremely pleasing and efficient solution.

(2) This is a highly potent and unirritating antiseptic compound; elegant both as to colour and smell, non-poisonous, and analgesic. Its uses are manifold, from soothing aphthous sores and removing the stench of ozæna to a mouth-wash or preventative of insect bites.

(3) Taka-diastrase. This ferment is formed of an aspergillus, and was discovered by Mr. Takamine and Prof. Atkinson, and is said—and, we think, rightly—to be the most potent diastatic agent yet known. It is put up in the tabloid form for internal use, and proves of great value in various digestive disturbances.

(4) Hydrastine deserves a more prominent place in nasal therapy in England than it has hitherto enjoyed, and the preparation under discussion is by far the best with which we are acquainted, as from it the disagreeable, bitter, and yellow-staining berberine has been removed. Its chief value is as tonic astringent, and is best used in a ten per cent. solution, and may often save nervous patients from the galvano-cautery at the same time that it improves the digestive organs by its stomachic properties.

Supplement

TO THE

JOURNAL OF LARYNGOLOGY,

DECEMBER, 1896.

BIBLIOGRAPHY.

	PAGES
DIPHTHERIA	1 to 8
MOUTH, PHARYNX, etc.	9 to 19
NOSE AND NASO-PHARYNX, etc.	20 to 22
LARYNX, etc.	23 to 25
ESOPHAGUS	26 and 27
THYROID	28 to 47
EARS	48 to 54

DIPHTHERIA.

ABEL (Greifswald). Experiment on the influence of winter on the diphtheria bacillus. *Centralbl. für Bacteriologie*, page 345, 1895.

ADOLPH (Frankfurt-a-M.). One hundred cases of diphtheria treated by Behring's heilserum. *Deutsche Med. Woch.*, 1896, No. 3.

ALEXANDRE. Deux cas de diphtérie traités par la sérothérapie. *Journ. de Méd. de Paris*, Dec. 9, 1894.

ATTIMONT. Mode d'emploi des injections de sérum dans la diphtérie. *Soc. Méd. de Nantes*; in *Gaz. Méd. de Nantes*, Jan. 12, 1895.

AUBEAU. Des applications de la micrographie et de la bactériologie à la précision du diagnostic chirurgical. *Soc. d'Éditions Scient.*, Paris, 1894.

AUERBACH. Remarkable case of diphtheria treated with antitoxin. *Centralbl. für Innere Medizin*, 1896, No. 8.

BARBIER. La vaccination antidiphtérique. *Rev. Gén. de Clin. et Thérap.*, July 25, 1894.

BARDACH. Études sur la diphtérie. *Ann. de l'Inst. Pasteur*, 1895, No. 1.

BARTH. Complications of antitoxin treatment. *Deutsche Med. Woch.*, 1896, No. 25.

BAZIN. Diphtheria: notes on the treatment by antitoxin. *Montreal Med. Journ.*, April, 1896.

BAZIN. Reinfection in diphtheria. *Montreal Med. Journ.*, April, 1896.

BERNARDLEIG. Complications articulaires de la diphtérie. Thèse de Paris, Jan., 1894.

BERNHEIM. Criticism of serum treatment in diphtheria. *Therap. Monats.*, 1896, No. 6.

BERTHELOT. Foyer diphtéritique créé à Saint-Ouen par un enfant venu de Chagny. *Journ. de Clin. et Thérap. Infant.*, Sept. 6, 1894.

BERTIN. Sérothérapie. Réponse à Mons. le Prof. Liebreich de Berlin, sur le traitement de la diphtérie par le sérum du cheval non immunisé. *Gaz. Méd. de Nantes*, Feb. 12, 1895.

BINET. Du traitement de l'angine diphtéritique par la résorcine. *Journ. de Clin. et Thérap. Infant.*, May 24, 1894.

BLEVER. La nucléine en tant que protéide protectrice ; son administration hypodermique aux différents stades de la diphtérie. *Rev. Int. de Rhin., Otol., et Lar.*, Feb. 10, 1895.

BLUMENFELD. Contribution to the serum treatment of diphtheria. *Wiener Klin. Woch.*, 1896, No. 18.

BOISSON. Traitement de la paralysie diphtéritique des muscles de la déglutition. Congrès de Méd. Interne, Lyon, Oct., 1894.

BOISSON. Un cas d'angine diphtéritique traitée par le sérum antidiphtéritique de Roux et suivie de mort. *Journ. de Clin. et Thérap. Infant.*, Mar. 15, 1895.

BONAIN. Traitement de l'angine et de la laryngite diphtéritiques. Broch. de 14 pages, imprimerie E. Jourand, Brest, 1894.

BONNAUD. Diphtérie et sérum de Behring. *Rev. Gén. de Clin. et Thérap.*, Jan. 26, 1895.

BONNIER, MME. De la nécessité de l'examen bactériologique dans les angines diphtéritiques. Thèse de Paris, July, 1894.

BOUREAU. Persistance et dangers du bacille diphtéritique. *Gaz. Hebdom. de Méd. et Chir.*, Feb. 2, 1895.

BRINKMANN. Two cases of vaginal diphtheria treated with Behring's heil-serum. *Deutsche Med. Woch.*, 1896, No. 24.

BROCA. Diphtérie traitée par la sérumthérapie. Arthrite suppurée du coude. Arthrotomie. Guérison. *Rev. Mens. des Mal. de l'Enf.*, Jan., 1895. La sérumthérapie à Reims. *Union Méd. du Nord-Est*, Jan. 15, 1895.

BROWNE, LENNOX. Letter on antitoxin cases at University College Hospital. *Brit. Med. Journ.*, Feb. 1, 1896.

BUCKINGHAM, E. M. A clinical study of cases of angina resembling diphtheria, in which the bacilli are reported absent. *Arch. Pediatrics (N.Y.)*, Dec., 1895.

CABANES. Un prix de 25,000 francs contre la diphtérie. L'histoire du prix Saint-Paul. *Gaz. des Hôp.*, Oct. 4, 1894.

CALLIGNON. Emploi du pétrole au sublimé dans la diphtérie et la scarlatine. *Rev. Gén. de Clin. et Thérap.*, Jan. 31, 1894.

CAPHAIR. Trois cas d'angine diphtéritique traités par le sérum de Roux. *Méd. Mod.*, Dec. 20, 1894.

CATRICE. Diagnostic de l'angine diphtéritique ; traitement par le permanganate de potasse. *Bull. et Mém. de la Soc. Méd. des Hôp. de Paris*, Aug. 2, 1894.

CHABEY. Un cas de diphtérie chez l'adulte traité par la sérumthérapie. *Journ. de Clin. et Thérap. Infant.*, Feb. 21, 1895.

CHÉRON. À propos du traitement de la diphtérie. *Tribune Méd.*, 1894, No. 3.

COMMISSION. Angine pseudo-membraneuse traitée par le sérum antitoxique de Roux ; albuminurie ; urémie ; arthropathie. *Rev. Mens. des Mal. de l'Enf.*, Jan., 1895.

COUF' TOUX. L'isolement dans la diphtérie. *Rev. Gén. de Clin. et Thérap.*, April 20, 1895.

COURMONT et DOYON. 1. Marche de la température dans l'intoxication diphtérique expérimentale. 2. Des lésions intestinales dans l'intoxication diphtérique expérimentale. *Comptes-rendus Hebd. des Séances de la Soc. de Biol.*, Feb. 8, 1895.

COUTON et GASSEK. Sur la recherche et la présence de l'albumine dans les urines d'enfants soumis aux injections de sérum antidiphtérique. *Bull. et Mém. de la Soc. Méd. des Hôp. de Paris*, Mar. 7, 1895.

DABNEY. Antitoxin and intubation for diphtheria. *Arch. Pediat.*, Mar., 1896.

D'ASTROS et ENGELHARDT. La sérothérapie de la diphtérie à Marseille à l'Hôpital de la Conception. *Bull. et Mém. de la Soc. Méd. des Hôp. de Paris*, April 26, 1895.

DE CRÉANTIGNES. Traitement local et traitement sérumthérapique dans la diphtérie. *France Méd.*, Nov. 9, 1894.

DELTHIE. Antagonisme de l'antisepsie et de la sérumthérapie. *Journ. de Méd. de Paris*, Nov. 18, 1894.

DESCROIZILLES. Sérumthérapie et diphtérie. *Soc. Méd. Chir.*; in *Rev. Gén. de Clin. et Thérap.*, Dec. 22, 1894.

DESSEAUX. Petite épidémie de diphtérie à Saint-Waart du Wal. *Normandie Méd.*, Jan. 1, 1895.

DIXEY. Vital statistics of diphtheria in London. *Brit. Med. Journ.*, Feb. 29, 1896.

DRAER. Bacteriological and clinical diagnosis in diphtheria. *Deutsche Med. Woch.*, 1896, No. 18.

DREYFUS. La sérumthérapie à Lyon. *Lyon Méd.*, Feb. 3, 1895.

DUBIAU. Sérumthérapie de Behring. *Rev. Gén. de Clin. et Thérap.*, Jan. 19, 1895.

DUCHESNE. Note sur quatre cas de diphtérie traités par la sérumthérapie. *Année Méd. de Caen*, Feb. 15, 1895.

DURIAN. Technique de la sérumthérapie dans la diphtérie. *Rev. Gén. de Clin. et Thérap.*, May 11, 1895.

ELOY. 1. Diphtérie et mercure (à propos du pansement au sublimé de l'angine diphtérique). 2. Pansement antiseptique de l'angine diphtérique par le sublimé. *Rev. Gén. de Clin. et Thérap.*, July 18, 1894.

ELOY. Sérothérapie et antisepsie dans la diphtérie. *Rev. Gén. de Clin. et Thérap.*, Nov. 24, 1894.

ERDBERG. Antitoxin treatment. *Petersburger Med. Woch.*, 1896, No. 15.

FILLIÈRE. Traitement de l'angine diphtérique et du croup par les pulvérisations de sublimé. *Journ. de Clin. et Thérap. Infant.*, Aug. 22, 1894.

FLICK, LAWRENCE F. Calomel as a specific in diphtheria. *Med. News*, April 25, 1896.

FORAC. De la préparation du sérum antidiphtérique. Thèse de Lyon, 1895.

FROELICH. Note sur le traitement de la diphtérie par les injections de sérum antitoxique. *Rev. Méd. de l'Est*, Oct. 15, 1894.

FUNCK. Manuel de sérothérapie antidiphtérique. Paris—chez Carré, 1895.

GABRICHEROVKI. Du rôle des leucocytes dans l'infection diphtérique. *Ann. de l'Institut Pasteur*, Oct., 1894.

GERLOCZY. On the value of serum therapy in diphtheria. *Wiener Klin. Rundschau*, 1896, Nos. 22, 24, 27.

GOLDSCHMIDT. De l'usage interne de perchlorure de fer liquide dilué, comme traitement de la diphtérie. *Rev. de Méd.*, Oct. 10, 1894.

GOODALL, E. Post-scarlatinal diphtheria. *Lancet*, March 14, 1896.

GOODALL, E. W. (London). Diphtheritic paralysis. An analysis of cases occurring at the Eastern Hospital, Homerton, during 1892-3. *Brain*, Vol. XVIII.

GOTTSTEIN. Antitoxin fatalities. *Therap. Monats.*, 1896, No. 5.

GOUBEAU et HUILOT. Traitement de l'angine diphthéritique par les badigéonnages au fond de la gorge avec une solution concentrée de sublimé dans la glycérine. *Arch. Gen. de Méd.*, Sept., 1894.

GOUBEAU. Traitement de l'angine diphthéritique par le sublimé en solution dans la glycérine. *Mercredi Méd.*, Jan. 3, 1894.

GUINON et ROUFFELAUGE. Un cas d'angine membraneuse traitée par le sérum de Roux. Mort avec anurie et convulsions urémiques. *Rev. Mens. des Mal. de l'Enf.*, Mar., 1895.

HAAS. Contribution à l'étude de l'étiologie générale de la diphthérie. Thèse de Paris, Mar., 1894.

HAEGLER. Remarks on diagnosis of diphtheria. *Courszbl. für Schweizer Aerzte*, No. 2, 1896.

HESSE. The bacteriological and clinical diagnosis of diphtheria. *Deutsche Med. Woch.*, 1896, No. 26.

HEWLETT and NOLAN. Bacteriological examination of one thousand cases of suspected diphtheria. *Brit. Med. Journ.*, Feb. 1, 1896.

HUTINEL. La diphthérie aux Enfants-Assistés de Paris. Sa suppression. Étude de prophylaxie. *Rev. Mens. des Mal. de l'Enf.*, Oct., 1894.

JOXON. Observation d'un malade atteint d'angine cliniquement croupale et traitée par le sérum de cheval. *Soc. Méd. Chir. des Hôp. de Nantes*; in *Gaz. Méd. de Nantes*, Feb. 12, 1895.

KANTHACK, A. A., and STEPHENS, J. W. A new and easy method of preparing serum agar-agar; an aid to the diagnosis of diphtheria. *Lancet*, March 28, 1896.

KANTHACK and STEVENS. The escape of diphtheria bacilli into the blood and organs. *Brit. Med. Journ.*, Jan. 25, 1896.

KASSOWITZ. Statistics of antitoxin treatment. *Wiener Klin. Woch.*, 1896, No. 17.

KELLY, J. E. Septicæmia following diphtheria. Treatment by streptococcus antitoxin. *N.Y. Med. Journ.*, Vol. LXIII., p. 243.

KORTWRIGHT. Practical experiences with antitoxin. *Brooklyn Med. Journ.*, Feb., 1896.

KOSSEL. Antitoxin. *Deutsche Med. Woch.*, 1896, No. 22.

KRUCKMANN. Intoxication by Behring's diphtheria heilserum. *Therap. Monats.*, 1896, No. 6.

LACHARRIÈRE, LADREIT DE. Diphthérie: difficultés des examens bactériologiques. *Soc. de Méd. de Paris*, Jan. 26; in *France Méd.*, Feb. 1, 1895.

LAHS. Antitoxin treatment. *Marburg Elwers*, 1896.

LANDOUZY. La sérothérapie: ses origines: caractères et fabrication du sérum antidiphthéritique. *Gaz. des Hôp.*, Nov. 19, 1894.

LANDOUZY. Les caractères du sérum antidiphthéritique: la technique des injections: leur valeur curative et préventive. *Gaz. des Hôp.*, Nov. 29, 1894.

LEBLÉTON et MAGDELAINE. Trois mois de sérothérapie et d'intubations à l'Hôpital des Enfants Malades. *Bull. et Mém. de la Soc. Méd. des Hôp. de Paris*, Feb. 7, 1895.

LEDoux-LEBARD. Action de la lumière sur le bacille diphthéritique. *Rev. Mens. des Mal. de l'Enf.*, Feb., 1894.

LE GENDRE. Sur l'angine pseudo-membraneuse microbienne consécutive à la diphthérie et prolongée par irritation chimique ou mécanique. *Soc. Méd. du Neuvième Arrondissement*, Jan. 11; in *Journ. de Méd. de Paris*, Jan. 26, 1894.

LE GENDRE. Traitement de la diphtérie par le sublimé en solution concentrée (1-20, 1-30) dans la glycérine. Thèse de Paris, June, 1894.

LE GENDRE. Diphtérie et sérumthérapie. Bull. et Mém. de la Soc. Méd. des Hôp. de Paris, Dec. 20, 1894.

LE GENDRE. Réaction sérothérapique hypothermique. Bull. et Mém. de la Soc. Méd. des Hôp. de Paris, Mar., 1895.

LEROUX. Sérumthérapie dans un cas d'angine diphtéritique. Méd. Infant., Dec. 15, 1894.

LESAGE. Traitement de la diphtérie par la sérumthérapie. Rev. de Thérap., Méd., Chir., Nov. 15, 1894.

LEVASSORT. Diphtérie et pétrole. Normandie Méd., Oct. 1, 1894.

LOOS. Researches on the relation of serum of healthy and diphtheritic children to antitoxin. Wiener Klin. Woch., 1896, No. 22.

McKEE, JAMES. An unusually mild case of diphtheria. Philadelphia Polyclinic, Feb. 1, 1896.

MARCIQUEY. Angines diphtéritiques et sérumthérapie. Rev. Gén. de Clin. et Thérap., Dec. 6, 1894.

MARIE. Angines diphtéritiques bénignes. Presse Méd., Feb. 16, 1895.

MARTHA. La guérison définitive chez les diphtéritiques. France Méd., Mar. 1, 1895.

MARTIN. Diagnostic bactériologique de la diphtérie et traitement de cette maladie par le sérum antitoxique. Bull. Méd., Oct. 17, 1894.

MARSH. Diphtheria treated with antitoxin in Glasgow Fever Hospital. Glas. Med. Journ., May, 1896.

MARTIN, SIDNEY. Cases of diphtheria treated by antitoxin at University College Hospital. Brit. Med. Journ., Jan. 25, 1896.

MARTIN, SIDNEY. Treatment of diphtheria by antitoxic serum. Clin. Journ., April 15 and 29, 1896.

MÉRY. Persistance des bacilles dans la gorge après la diphtérie. Bull. et Mém. de la Soc. Méd. des Hôp. de Paris, Feb. 21, 1895.

MÉRY. Sérum antidiphtéritique. Son emploi dans le traitement de la diphtérie. Gaz. Méd. de Paris, Nov. 3, 1894.

MESLAY. La sérumthérapie dans la diphtérie. Rev. Int. de Méd. et Chir. Prat., Jan. 25, 1895.

MICHEL. Étude sur le diagnostic et le traitement de la diphtérie. Thèse de Paris, May, 1895.

MIKES, J. H. An unusually mild case of diphtheria. Philadelphia Polyclinic, Feb. 1, 1896.

MOIZARD et PEREGAUX. Deux cent trente et un cas de diphtérie traités par le sérum antidiphtéritique. Bull. et Mém. de la Soc. Méd. des Hôp. de Paris, Dec. 13, 1894.

MOIZARD. Traitement de l'angine diphtéritique par le sublimé en solution au 1-20 ou au 1-30 dans la glycérine. Bull. et Mém. de la Soc. Méd. des Hôp. de Paris, July 19, 1894.

MONOD, H. La mortalité diphtéritique depuis le sérum. Bull. Acad. Méd., Dec. 17, 1895.

MONTI (Wien). On diphtheria. Allg. Wiener Med. Zeitung, 1896, No. 1.

MOUSSONS. La diphtérie à l'Hôpital des Enfants. Quarante et trois cas étudiés au point de vue bactériologique. Quinze cas traités par le sérum antidiphtéritique. Journ. de Méd. de Bordeaux, Mar. 17, 1895.

NETTER. Note sur une petite épidémie de diphtérie à l'Hôpital d'Aubervilliers. Diphtérie communiquée par des enfants dont la gorge ne présente pas de fausses membranes. Bull. et Mém. de la Soc. Méd. des Hôp. de Paris, Feb. 21, 1895.

- NICOLAS. Pouvoir bactéricide du sérum antidiphthérique. Soc. de Biol., Nov. 30, 1895.
- NICOLAS. Pouvoir bactéricide du sérum antidiphthérique. Thèse de Lyon, 1895.
- NICOLL. Post-diphtheritic paralysis. Arch. Pediat., April, 1896.
- PALTAUF. Remarks on the case of sudden death of a child following a preventative injection of antitoxin. Wiener Klin. Woch., 1896, No. 16.
- PARK, W. H. Comments on some of the objections offered to the use of antitoxin in the treatment of diphtheria. Med. News, Feb. 22, 1896.
- PEREGAUX. Etude sur deux cent quarante et neuf cas de diphthérie traités par le sérum antidiphthérique. Thèse de Paris, Jan., 1895.
- PÉRON. Traitement de la diphthérie par la sérothérapie. Ann. de Méd. Scient. et Prat., Jan. 11, 1895.
- PIEDALLU. Le traitement de la diphthérie. Rev. Gén. de Clin. et Thérap, Feb. 7, 1894.
- PINSOT. À propos de la sérumthérapie contre la diphthérie. Rev. Méd. de l'Est, Nov. 1, 1894.
- PILLIÈRE. Traitement de l'angine diphthérique et du croup par les pulvérisations de sublimé. Journ. de Clin. et Thérap. Infant., Sept. 20, 1894.
- POPE. Feeding under chloroform in diphtheritic paralysis. Brit. Med. Journ., June 15, 1895.
- PORQUET. Note sur treize cas de diphthérie traités par la sérumthérapie. Année Méd. de Caen, April 15, 1895.
- PREISCH. The pathological anatomy of diphtheritic paralysis. American Journ. of Med. Sciences, CX., No. 1.
- QUERMONNE. Note sur deux cas de diphthérie. Année Méd. de Caen, Dec. 15, 1894.
- RABOT. Prélude à la sérothérapie. La diphthérie à Lyon. L'œuvre de Behring. La sérothérapie à Paris. La sérothérapie à Lyon. Lyon Méd., Dec. 16, 1894.
- RAPPIN. Résultats du traitement de quarante et six cas de diphthérie par la sérumthérapie. Gaz. Méd. de Nantes, Mar. 12, 1895.
- RAUGÉ. La valeur et les origines de la sérumthérapie diphthérique. Bull. Méd., Dec. 2, 1894.
- REVILLARD. Les rapports entre la tuberculose et la diphthérie. Rev. de la Tuberculose, Oct., 1894.
- RICOCHON. La sérumthérapie antidiphthérique à la campagne. Gaz. Hebdom. de Méd. et Chir., Jan. 19, 1895.
- ROBERT. Étude bactériologique de la diphthérie. Arch. de Méd. Navale et Coloniale, Jan., 1895.
- ROETH, A. G. Micrococcus Brison. A contribution to the study of diphtheria. Boston Med. and Surg. Journ., Thurs., Jan. 23, 1896.
- ROSENTHAL (Berlin). Chloride of iron in diphtheria. Ther. Monats., No. 11, 1895.
- ROUSSEAU SAINT-PHILIPPE. Diphthérie et sérumthérapie. Journ. de Méd. de Bordeaux, Feb. 24, 1895.
- ROUX. Contribution à l'étude de la sérumthérapie dans la diphthérie. Bull. Méd., Sept. 5, 1894.
- RUBENS. Antitoxin and calomel in diphtheria. Therap. Monats., 1896, No. 4.
- RUFFER, ARMAND. Letter on antitoxin cases at University College Hospital. Brit. Med. Journ., Feb. 1, 1896.
- RUNDLEISCH (Berlin). Communication on the first year of treatment with

Behring's heilserum in the Kgl. Chir. Universitäts Klinik in Berlin. *Langenbeck Archiv*, No. 7, p. 4.

SAPELIER. Pratique de la sérumthérapie antidiphthérique. *Bull. Gén. de Thérap.*, Oct. 30, 1894.

SARDEMANN. Antitoxin and arthritis. *Deutsche Med. Woch.*, 1896, No. 26.

SCHLESINGER (Berlin). Leukocytosis in diphtheria. *Archiv für Kinderheilk.*, Band 19, Heft 5 and 6.

SEITZ (München). Report of the serum commission of the Münchener Aerztlichen Verein. *Münchener Med. Woch.*, 1896, No. 7.

SEQUEIRA. Chronic pharyngeal affections and their relation to diphtheria. *Brit. Med. Journ.*, Jan. 18, 1896.

SEQUEIRA, J. H. Chronic pharyngeal affections and their relation to diphtheria. *Lancet*, Jan. 18, 1896.

SEVESTRE. La prophylaxie de la diphtérie à l'Hospice des Enfants Assistés. *Rev. Mens. de Mal. de l'Enf.*, Nov., 1894.

SEVESTRE et MESLAY. Note sur cent soixante-dix et neuf enfants entrés au service d'isolement de la diphtérie à l'Hôpital Trousseau du 1^{er} au 25 déc., 1894. *Bull. et Mém. de la Soc. Méd. des Hôp. de Paris*, Mar. 7, 1895.

SEVESTRE. Note sur quelques injections de sérum de cheval non immunisé. *Bull. et Mém. de la Soc. Méd. des Hôp. de Paris*, April 4, 1895.

SEVESTRE et MÉRY. Sur la persistance du bacille chez les enfants guéris de la diphtérie. *Bull. et Mém. de la Soc. Méd. de Hôp. des Paris*, Feb. 14, 1895.

SHURLY, B. R. Antidiphtheritic serum and Loeffler's solution, with a report of twenty-six cases. *The Therap. Gaz.*, Feb. 15, 1896.

SIMON. Diagnostic et traitement de la diphtérie. *Bull. Méd.*, Nov. 28, 1894.

SIMON. Du traitement de la diphtérie. *Bull. Méd.*, Dec. 12, 1894.

SIMON. Épidémie de diphtérie dans un village traitée par le sérum antitoxique. *Méd. Mod.*, Feb. 6, 1895.

SOERENSEN. Experiments with serum therapy in diphtheria in the Blegdam Hospital in Copenhagen. *Therap. Monats.*, Mar., 1896.

SONLIÉ. Le sérum antidiphthérique à Alger. Sur la technique de la préparation en grand du sérum antidiphthérique. *Bull. Méd. de l'Algérie*, Feb. 10, 1895.

STOKES, W. R. The bacteriological examination of nine autopsies on cases of diphtheria treated with antitoxin. *Boston Med. and Surg. Journ.*, Dec. 12, 1895.

STRAUS. Rapport sur la sérumthérapie dans la diphtérie. *Acad. de Méd. de Paris*; Séance du 16 octobre, 1894.

SUDECK (Hamburg). On the existence of diphtheroid bacilli in the air. *Festschrift des Aerztlichen Vereins in Hamburg*, 1896.

SYMES. Diphtheria in cats. *Brit. Med. Journ.*, June 6, 1895.

TANOVSKY (Warschau). Serum treatment in diphtheria, and some remarks on this treatment. *Archiv für Kinderheilk.*, Band 20, Heft 1 and 2.

TÉZENAS DU MONCEL. Contribution à l'étude de la diphtérie : diagnostic et étiologie. Thèse de Lyon, Jan., 1894.

THIBIERGE. Angine diphtérique associée bénigne traitée par le sérum. Accidents toxiques. *Rev. Mens. des Mal. de l'Enf.*, May, 1895.

THOUVENET. Un cas de diphtérie infectieuse traité par les injections de sérum antidiphthérique du Dr. Roux. Guérison. *Limousin Méd.*, Jan. 1, 1895.

TISON. La sérothérapie dans la diphtérie et le diagnostic bactériologique des angines. *Journ. de Méd. de Paris*, April 14, 1895.

TOPART. Étude historique sur le traitement de la diphtérie. Thèse de Paris. Mar., 1894.

TRIPET. Angine diphthérique traitée par la sérothérapie. *Rev. Gén. de Clin. et Thérap.*, Nov. 24, 1894.

TURNER, J. B. Treatment of epistaxis in diphtheria. *Philadelphia Polyclinic*.

VARIOT. Doit-on employer actuellement le sérum antidiphthérique comme procédé d'immunisation chez l'homme? *Journ. de Clin. et Thérap. Inf.*, Mar., 1895.

VARIOT. Inefficacité du sérum antidiphthérique dans seize cas de diphthérie toxique suivie de mort. *Journ. de Clin. et Thérap. Inf.*, May 16, 1895.

VARIOT. Le sérum antidiphthérique est-il homogène? *Journ. de Clin. et Thérap. Inf.*, Mar. 15, 1895.

VARIOT. Le traitement de la diphthérie par l'antitoxin. *Journ. de Clin. et Thérap. Inf.*, Sept. 13, 1894.

VARIOT. 1. Nouveaux résultats favorables du traitement de la diphthérie par l'antitoxin. 2. Verrue de la muqueuse buccale coïncident avec des verrues multiples des mains. *Journ. de Clin. et Thérap. Inf.*, Oct. 25, 1894.

VARIOT. Note sur l'angine diphthérique atténuée ou bactériologique. *Journ. de Clin. et Thérap. Inf.*, Feb. 21, 1895.

VARIOT. Observations sur les modifications de la température et du pouls consécutives aux injections du sérum antidiphthérique. *Bull. et Mém. de la Soc. Méd. des Hôp. de Paris*, Mar., 1895.

VARIOT. Observations de diphthérie associée à la tuberculose traitées par le sérum antidiphthérique et suivies de mort. *Journ. de Clin. et Thérap. Inf.*, April 11, 1895.

VARIOT. Quelques réflexions sur l'hyperthérémie consécutive aux injections de sérum antidiphthérique. *Bull. et Mém. de la Soc. Méd. des Hôp. de Paris*, April 4, 1895.

VARIOT. Remarques sur les recherches bactériologiques appliquées à l'étude clinique de la diphthérie. *Journ. de Clin. et Thérap. Inf.*, May 10, 1894.

VARIOT. Une épidémie de diphthérie dans une petite ville de Bourgogne. *Journ. de Clin. et Thérap. Inf.*, July 19, 1894.

VARNAIL. Cas de scarlatine diphthérique, apyrétique forme Bartels. *Rev. Mens. des Mal. de l'Enf.*, Oct., 1894.

VEILLONE. Recherches sur l'étiologie et la pathogénie des angines aiguës non diphthériques. Thèse de Paris, July, 1894.

VIRNEISEL. Antitoxin statistics. *Münchener Med. Woch.*, No. 19.

WARTMANN. Diphtheria in the Canton St. Gallen. *Courszbl. für Schweizer Aerzte*, 1896, No. 9.

WATELET. Traitement de la diphthérie. *Gaz. Hebd. de Méd. et Chir.*, Jan. 12, 1895.

WEHLIN. Contagion de la diphthérie après la sérumthérapie. *Rev. Gén. de Clin. et Thérap.*, April 6, 1895.

WEHLIN. Une petite épidémie de diphthérie. *Rev. Gén. de Clin. et Thérap.*, June 20, 1894.

WHITE. Antitoxin. Indications for its use and mode of administration. *Brooklyn Med. Journ.*, Feb., 1890.

WILLAND. Serum treatment of diphtheria in the Basler Children's Hospital. *Medizin. Gesellschaft in Basel, Meeting*, Sept. 12, 1895.

WILSON, ALBERT. Diphtheria and antitoxin. *Brit. Med. Journ.*, April 11, 1896.

WILHAUER (Halle-a-S.). Instruments for serum treatment. *Münchener Med. Woch.*, 1896, No. 4.

WOOD, G. E. C. Method for rapidly producing diphtheria antitoxins. *Lancet*, April 12, 1896.

ZEPFINGER. Results of serum therapy in diphtheria in the year 1895 in the Kronprinz Rudolf Children's Hospital. *Wiener Klin. Woch.*, 1896, No. 22.

MOUTH, PHARYNX, ETC.

AKERBLOM. Acute inflammation of the ductus Rivini and the sub-lingual gland. *Monats. für Ohrenheilk.*, No. 3, 1895.

ALVANTI. Traitement hydrothérapique de la coqueluche. *Journ. de Clin. et Thérap. Infant.*, Sept. 6, 1894.

ANDERSON. Angioma of pharynx. *Brit. Med. Journ.*, Mar. 28, 1896.

ANNEQUIN. Phlegmon infectieux aigu de plancher de la bouche d'origine alvéolo-dentaire (angine de Ludwig). *Dauphiné Méd.*, 1894, No. 5.

AUCLAIR. L'angine du rhumatisme articulaire aigu. *Bull. Méd.*, Feb. 18, 1894.

AUDRY. Réflexions sur les hyperkératoses passives, à propos d'un cas de leucokératose linguale post-syphilitique. *Mercredi Méd.*, Jan. 10, 1894.

AVELLIS. Le traitement médicamenteux des maux de gorge. *Rev. Int. de Rhin., Otol., et Lar.*, Jan. 25, 1895.

BARJON. Œdème aigu rétro-pharyngée et pneumonie. *Soc. des Sc. Méd. de Lyon*; in *Lyon Méd.*, April, 1894.

BAUDET. La résorption progressive des arcades alvéolaires et de la voûte palatine ou mal perforant buccal. *Union Méd.*, Nov. 8, 1894.

BAUDET. La résorption progressive des arcades alvéolaires ou mal perforant buccal. *Arch. Gén. de Méd.*, Jan., 1895.

BAUDRILLER. De l'angine granuleuse. Thèse de Paris, May, 1895.

BEAUSOLEIL. Calcul de l'amygdale. *Gaz. Hebdom. des Sc. Méd. de Bordeaux*, Feb. 17, 1895.

BEAUSOLEIL. De l'inflammation aiguë de l'amygdale linguale. *Revue de Laryng.*, Dec. 1, 1895.

BELLIARD. Abcès chaud rétro-pharyngien. *Soc. franç. de Lar., Otol., et Rhin.*; Séance du 2 mai; *Rev. de Lar., Otol., et Rhin.*, Sept. 1, 1894.

BÉRARD. Cas d'actinomyose péri-laryngo-œsophagienne. *Soc. des Sc. Méd. de Lyon*; in *Lyon Méd.*, April 21, 1895.

BERGER. Des procédés de chéiloplastie applicables à la réparation des pertes de substance étendues des lèvres. *Congrès franç. de Chir.*, Lyon, Oct., 1894.

BERLIOZ et LÉPINOIS. Examen d'un calcul amygdalien (phosphates principalement). *Journ. de Pharm.*, Nov. 15, 1895.

BIDWELL. Adenoma of tongue. *Brit. Med. Journ.*, March 14, 1896.

BILHAUT. Note sur un cas de macroglossie. *Journ. de Méd. de Paris*, Dec. 16, 1894.

BINET. Des accidents de l'extirpation des ganglions tuberculeux du cou. Angine. Thèse de Paris, July, 1894.

BLACHE. Moyen pratique d'obtenir l'antisepsie buccale et pharyngée, canule abaisse langue de Guersant. *Méd. Mod.*, Nov. 30, 1895.

BLONDIAN. Des pharyngites chroniques et de leur traitement par le phénol sulfuriciné. *Bull. Soc. franç. d'Otol.*, XI, p. 437, 1895.

BOIFFIN. Présentation d'un malade ayant subi la palatoplastie. *Soc. Méd. Chir. des Hôp. de Nantes*; in *Gaz. Méd. de Nantes*, Feb. 12, 1895.

BOLTZ (Hamburg). Case of round-celled sarcoma of the soft palate cured. *Festschrift des Aerztlichen Vereins in Hamburg*, 1896.

BOTEY. De la paresthésie pharyngo-laryngienne et nasale chez les neurasthéniques. *Rev. de Lar., Otol., et Rhin.*, Sept. 15, 1894.

BOULAY. Sur deux cas de paresthésie du pharynx. *Soc. Franç. de Lar. et Otol.*, May 4, 1895.

BOURGES. Sur les paralysies du voile du palais consécutives à des angines non-diphthéritiques. *Rapport de Proust. Acad. de Méd.*; Séance du 18 déc., 1894.

BOUREAU. Diagnostic bactériologique des angines. *Rev. Gén. de Clin. et Thérap.*, Feb. 2, 1895.

BRASSEUR. Phlegmon et abcès sublingual (angine de Ludwig). *Journ. des Sc. Méd. de Lille*, 1894, No. 21.

BROWNE, L. Chronic hypertrophy and varix of the lingual tonsil. *Liverpool Med. Chir. Journ.*, Jan., 1896.

BROWNE, L. The lingual tonsil. *The Med. Mag.*, Jan., 1896.

BRUN. La maladie de Riga. Ulcération papillomateuse du frein de la langue. *Presse Méd.*, Jan. 26, 1895.

BURGESS. Hæmorrhagic tonsillitis. *Brit. Med. Journ.*, Jan. 4, 1896.

CAMESCASSE. Antisepsie de la bouche et du pharynx. *Journ. de Méd. et Chir. Prat.*, Mar. 25, 1894.

CAMPBELL, J. T. Pharyngo-mycosis leptothrica. *Med. News*, April 4, 1896.

CANABY. De l'ablation des amygdales hypertrophiées avec l'anse électrothermique. Thèse de Bordeaux, Jan., 1895.

CARBONNIER. Contribution à l'étude de l'angine; syphilitique aux trois périodes; dysphagie prolongée. Thèse de Lyon, Jan., 1894.

CARTAZ. Deux cas d'abcès chroniques de l'amygdale. *Bull. et Mém. de la Soc. de Lar., Otol., et Rhin. de Paris*, Feb., 1894.

CARTAZ. Deux cas de lymphadénome de l'amygdale. *Soc. franç. de Lar. et Otol.*, Paris, May 1, 1895.

CASTEX. Exposé critique de quelques cas rares. *Soc. franç. de Lar. et Otol.*, Paris, May 3, 1895.

CHAULLOU et MARTIN. Étude clinique et bactériologique sur la diphtérie. *Ann. de l'Inst. Pasteur*, July, 1894.

CHAPPELL, W. F. Report of three cases of xerostoma or dry mouth. *N.Y. Med. Journ.*, Vol. LXIII., p. 277.

CHAUNEAU. Crises syncopales dues à l'hypertrophie de l'amygdale linguale. *Rev. Gén. de Clin. et Thérap.*, May 16, 1894.

CIÉNY. Parotidite canaliculaire symptomatique d'un calcul du canal de Sténon. *Union Méd. du Nord-Est*, April, 1894.

CHERVIN. Orthophonie méthodique consécutive aux staphylo-rhaphies. *Congrès franç. de Chir.*, Lyon, Oct., 1894.

CHERVIN. Faut-il couper le frein de la langue? *La Voix*, Feb., 1894.

CLAISSE et DUPRÉ. Étude anatomo-pathologique de quelques cas de parotidite. *Bull. de la Soc. Anat. de Paris*, fasc. 1, Jan. 1894.

CLAISSE et DUPRÉ. Les infections salivaires. *Arch. de Méd. Expér. et d'Anat. Pathol.*, Jan. 1, 1894.

CLARK, M. D. Hypertrophy of the lingual tonsil, with report of seven cases. *Philadelphia Polyclinic*, March 28, 1896.

COEN. De l'alatie idiopathique. *Rev. Internat. de Rhin., Otol., et Lar.*, Jan. 10, 1895.

COEN. The present state of therapy of stuttering. *Wiener Klin. Woch.*, 1896, Nos. 19, 20.

COHANESCO. Scarlatine pharyngie. Quelques-unes de ses infections secondaires aux organes voisins. Thèse de Paris, July, 1894.

COLLÉL. Des tumeurs mixtes des glandes salivaires des lèvres. Thèse de Paris, May, 1895.

COLLINE. Complications rénales dans les amygdalites aiguës. Thèse de Bordeaux, 1894.

COMBAUD. La crêsole contre la coqueluche. *Journ. de Clin. et Thérap. Infant.*, April 5, 1894.

- COMBY. La coqueluche à l'hôpital Trousseau. Bull. et Mém. de la Soc. Méd. des Hôp. de Paris, Mar. 14, 1895.
- CORNIL. Tuberculose larvée des trois amygdales. Acad. de Méd.; Séance du 14 mai, Paris, 1895.
- COUÉTOUX. De la bave infantile et du ronflement. Rev. Mens. des Mal. de l'Enf., Jan., 1895.
- COURMONT. Crises de spasme pharyngé chez les tabétiques. Rev. de Méd., Sept. 10, 1894.
- CURTIS, G. L. A plea for conservative oral surgery. N.Y. Med. Journ., Vol. LXIII., p. 833.
- DANZIGER. New tongue depressor with a changeable mouthpiece. Therap. Monats., 1896, No. 4.
- DARDIGNAC. Un cas de tuberculôme lingual. Abscès froid, tuberculeux, de la langue. Gaz. Hebdom. de Méd. et Chir., Aug. 25, 1894.
- DARLOUET. Du traitement des angines non-diphthéritiques au moyen de badigeonnages de guaiacol glycérine. Semaine Méd., 1894, No. 70.
- DAUENE. Contribution à l'étude de l'hystérie; du bégayement chez les hystériques. Thèse de Paris, May, 1894.
- DEBOVE. Des aphasies. Méd. Moderne, Jan. 2, 1895.
- DELASALLE. Étude sur le muguet. Thèse de Paris, June, 1894.
- DE LAVARENNE. Traitement des manifestations linguales de la syphilis. Bull. Soc. franç. d'Otol., XI., p. 364, 1895.
- DELBET. Le phlegmon sublingual (angine de Ludwig). Gaz. Méd. de Paris, April 7, 1894.
- DEMOULIN. De l'angine de Ludwig. Arch. Gén. de Méd., Feb., 1894.
- DENHARDT. New therapy of stuttering. Deutsche Medizinische Zeitung, 1896, No. 55.
- DE SILVERA. De la bave infantile. Thèse de Paris, July, 1894.
- DIEULAFOY. Prophylaxie et traitement des tumeurs adénoïdes et de l'hypertrophie des amygdales. Acad. de Méd. de Paris; Séance du 30 avril, 1895.
- DIEULAFOY. Tuberculose larvée des trois amygdales. Acad. de Méd.; Séance du 30 avril, Paris, 1895.
- DUBREUILH et FRÈCHE. Lichen plan de la langue et de la muqueuse buccale. Soc. de Méd. et Chir. de Bordeaux, Jan. 5 and 12, 1894.
- DU CASTEL. Chancre syphilitique de l'amygdale. Rev. Gén. de Clin. et Thérap., Aug. 17, 1894.
- DU CASTEL. Glossite d'origine incertaine. Soc. franç. de Derm. et Syphil.; Séance du 12 avril, 1894.
- DU CASTEL. Glossite gommeuse due à syphilis héréditaire. Soc. franç. de Derm. et Syphil.; Séance du 10 jan., 1895.
- DU CASTEL. Lymphangiectasies de la muqueuse buccale. Soc. franç. de Derm. et Syphil., Paris, April, 1895.
- DU CASTEL. Sur un cas de nécrose du maxillaire à la période préataxique du tabès. Soc. franç. de Derm. et Syphil., Paris, May 9, 1895.
- DU CASTEL. Tuberculose linguale et palatine. Soc. de franç. de Derm. et Syphil.; Séance du 8 mars, Paris, 1894.
- DUJARDIN-BEAUMETZ. L'art de formuler: des collyres, des irrigations nasales, des collutoires, des eaux et poudres dentifrices, des gargarismes. Bull. Gén. de Thérap., May 31, 1894.
- DUKES, CLEMENT. A record of the common sore throats occurring amongst four hundred adolescents during a period of twenty-five years. Lancet, Feb. 15, 1896.
- ELOY. L'impetigo et la désinfection bucco-nasale dans la rougeole. Rev. Gén. de Clin. et Thérap., Sept. 26, 1894.

EMOURGEON. Contribution à l'étude de la cachexie pachydermique. Thèse de Paris, June, 1894.

ESCAT. Phlegmonous inflammation of the lingual tonsil. Rev. Hebdl. de Laryng., Feb. 1, 1896.

FAUVEL. De l'emploi des solutions de chlorure de zinc dans les affections pharyngées et laryngées. Soc. franç. de Lar. et Otol., Paris, May 3, 1895.

FÉLIZET. Staphylorrhaphie facile. Soc. de Chir. de Paris; Séance du 24 oct., 1894.

FÉRÉ. Note sur le défaut d'indépendance des mouvements de la langue et sur la fréquence des stigmates physiques de dégénérescence chez les sourdes-muets. Comptes-rendus Hebdl. de la Soc. de Biol., Feb. 16, 1894.

FEULARD. Pyodermite impétigineuse de la face; stomatite; adeno-phlegmon du cou; albuminurie. Soc. franç. de Derm. et Syphil., Paris, April 20, 1895.

FONTAGRE. Quatre cas d'angine de Ludwig. Soc. des Sc. Méd. de la Côte d'Or, Feb.; in Progrès Méd., Mar. 17, 1894.

FOURNIER. Du chancre amygdalien. Bull. Méd., Jan. 30 and Feb. 3, 1895.

FOURNIER. Le chancre syphilitique de la langue. Son diagnostic avec l'ulcère tuberculeux. Gaz. Méd. de Paris, Dec. 22, 1894.

FOURNIER. Le phagédénisme scrofuleux. Union Méd., Aug. 7, 1894.

FOX, R. The abortive treatment of quinsy. Lancet, Feb. 8, 1896.

FRAENKEL. Contribution à l'étude du bromure d'éthyle comme anesthésique général. Thèse de Paris, Feb., 1894.

FRAENKEL, B. Die infectiöse Natur der Tonsillitis lacunaris. Archiv für Laryngologie and Rhinologie, herausgegeben von Dr. B. Fränkel, Band 4, Heft 1.

FRIEDRICH, A. G. The necessity for the early recognition of morbid growths in the mouth. New Orleans Med. and Surg. Journ., March, 1896.

FULLERTON. An unusual condition of the pillars of the fauces, probably congenital. Brit. Med. Journ., May 4, 1895.

GALIPPE. Le mal perforant buccal. Journ. des Conn. Méd., May 3, 1894.

GALIPPE. Note sur la présence de microbes dans les conduits excréteurs des glandes salivaires normales. Comptes-rendus Hebdl. de la Soc. de Biol., Feb. 9, 1894.

GARCIN. Actinomycose du maxillaire supérieur gauche simulant une lésion syphilitique. Soc. des Sc. Méd. de Lyon; in Lyon Méd., Dec. 23, 1894.

GAREL. Cas de sténose cicatricielle du pharynx d'origine syphilitique. Province Méd., Dec. 22, 1894.

GAREL. Malformation congénitale du voile du palais. Soc. franç. de Lar., Otol., et Rhin.; Séance du 30 avril; et Rev. de Lar., Otol., et Rhin., July 1, 1894.

GAREL. Sur une forme de pharyngite permettant de reconnaître le diabète de l'albuminurie. Congrès de Méd. Interne, Lyon, Oct., 1894.

GARZIA. Glossite folliculeuse aiguë infectante. Considérations cliniques et recherches bactériologiques. Rev. Int. de Rhin., Otol., et Lar., Sept. 10, 1894.

GASTON. Glossite exfoliatrice marginée. Soc. de Derm. et Syphil.; Séance du 18 jan., Paris, 1894.

GAUTIER. Du lichen plan buccal. Du lichen plan isolé de la bouche. Thèse de Bordeaux, Dec., 1894.

GENTILHE. De la stomatite impétigineuse. Thèse de Bordeaux, June, 1894.

GIDON. Paralyse du voile du palais, puis des muscles de la face, etc. Difficultés du diagnostic. Ann. Méd. de Caen, Sept. 15, 1894.

GIROUD. Infections salivaires ascendantes. Comptes rendus Hebdl. des Séances de la Soc. de Biol. de Paris, Jan. 19, 1894.

GOUGHENHEIM. Amygdalites aiguës: amygdalite herpétique; angine rhumatismale aiguë. Gaz. Méd. de Paris, Jan. 27 and Feb. 3, 1894.

GOUGUENHEIM. Amygdalite phlegmoneuse suppurée. *Gaz. Méd. de Paris*, Feb. 10, 1894.

GOUGUENHEIM. Des abcès rétro-pharyngiens. *Gaz. Méd. de Paris*, Feb. 24, 1894.

GOUGUENHEIM et RIPAULT. Des abcès péri-amygdaliens. *Bull. et Mém. de la Soc. Méd. des Hôp. de Paris*, July 19, 1894.

GRALLAN. De l'antisepsie buccale et nasale. Thèse de Paris, May 1894.

GRUMACH. On a hairy pharyngeal polyp. Inaugural dissertation, Königsberg, 1895.

GUELPA. Pathogénie et traitement de la diphtérie. *Ass. franç. pour l'Avanc. des Sciences*, 23rd Session, Caen, Aug., 1894.

GUÉMENT. De l'influence exercée par la présence des végétations adénoïdes sur l'augmentation de volume des amygdales. *Ann. de la Policlin. de Bordeaux*, Jan., 1894.

GUÉPIN et RIPAULT. Séméiologie des tumeurs de l'amygdale. Leur diagnostic. Indications et procédés opératoires. *Gaz. des Hôp.*, June 23, 1894.

HACHE. Ulcères ronds du pharynx. *Soc. Méd. de Reims*, Feb. 21; in *Union Méd. du Nord-Est*, April, 1894.

HANSHATTER et ETIENNE. Parotidite à staphylocoques dans un cas de typhus exanthématique. *Rev. Méd. de l'Est*, Oct. 15, 1894.

HASSLER. Coup de feu grave de la face. Restauration des maxillaires, des lèvres, et du nez. *Congrès franç. de Chir. de Lyon*, Oct., 1894.

HAUG. Lipo-myxofibrom der Mandel. *Archiv für Laryngologie und Rhinologie*, herausgegeben von Dr. B. Fränkel, Band 4, Heft 2.

HENRY. Le temps de réaction des impressions gustatives mesuré par un compteur à secondes. *Comptes-rendus Hebd. des Séances de la Soc. de Biol.*, Nov. 2, 1894.

HEYMANN. Adhérences et rétrécissements pharyngiens et laryngiens dans la syphilis. *Arch. Int. de Lar., Rhin., et Otol.*, Mar. and April, 1895.

HIRTZ. Paralysie labio-glosso-laryngée; début par l'atrophie du membre supérieur gauche. *Bull. et Mém. de la Soc. Méd. des Hôp. de Paris*, Dec. 6, 1894.

HOULIÈRES, BRUMAUD DES. Contribution à l'étude de l'amygdalite aiguë. Analogie des orchites amygdaliennes et des orchites ovariennes dans quelques cas particuliers. Thèse de Paris, Dec., 1894.

HUDELS et BORAGES. Recherches bactériologiques sur les fausses membranes des syphilides diphtéroïdes. *Comptes-rendus Hebd. des Séances de la Soc. de Biol.*, Feb. 2, 1894.

HUGUET et DE BOVIS. Contribution à l'étude des phlegmons sous-hyoïdiens (phlegmons sub-linguaux, angines de Ludwig). *Arch. Gén. de Méd.*, April and May, 1894.

JABOULAY. Indications de l'exothyropexie et contre-indications. *Méd. Mod.*, May 5, 1894.

JAMIESON. Superficial affections of the red portions of the gums. *Brit. Med. Journ.*, Dec. 7, 1895.

JAYLE. Hypertrophie chronique des parotides et des sous-maxillaires. *Bull. de la Soc. Anat. de Paris*, fasc. 3, Jan. and Feb., 1894.

JOAL. Réflexes amygdaliens. *Soc. franç. de Lar., Otol., et Rhin.*; Séance du 2 mai: *Rev. de Lar., Otol., et Rhin.*, Aug. 1, 1894.

JOHNSON, RAYMOND. Swellings of the parotid. *Brit. Med. Journ.*, May 2, 1896.

JOSIAS. Accidents occasionnés par le salol donné à l'intérieur. *Soc. de Thérap. de Paris*; Séance du 14 mars, 1894.

JULLIEN. Glossite secondaire tardive. *Bull. Méd.*, Feb. 21, 1894.

- JULLIEN. Lésion syphilitiques secondaires tardives de la langue. *Ann. de Méd. Scient. et Prat.*, Aug. 15, 1894.
- KAYSER. Criticism of pharyngo-therapy. *Therap. Monats.*, 1896, No. 5.
- KELLY, E. J. To what extent is tonsillitis contagious? *Philadelphia Polyclin.*, March 21, 1896.
- KNOX. Actinomycosis of cheek and neck. *Glas. Med. Journ.*, May, 1896.
- KOPPEL. The acute retropharyngeal abscesses of infancy and childhood. *N.Y. Med. Journ.*, Vol. LXIII., p. 449.
- LABOURT. Contribution à l'étude des inflammations aiguës de l'amygdale linguale. Thèse de Bordeaux, 1894.
- LABOULE. Le traitement physiologique de la mort : les tractions rythmées de la langue, moyen rationnel et puissant de ramener la fonction respiratoire et la vie (18 illustrations; F. Alcan, éditeur; Paris, 1894).
- LAFFOLLEY. De l'hypertrophie simple des glandes parotides. Thèse de Paris, Jan., 1894.
- LAGOUTTE. Squirrhe atrophique de la langue. *Gaz. des Hôp.*, May, 1894.
- LANNELONGUE et ACHARD. Ostéomyélite du maxillaire inférieur chez le languroo. *Acad. des Sc.*; Séance du 3 déc., Paris, 1894.
- LAPALLE. Perforation congénitale du pilier postérieur gauche au niveau de la luette. *Journ. Méd. Bordeaux*, Dec. 8, 1895.
- LARGER. Nouveau procédé de chéiloplastie. *Soc. de Chir. de Paris*; Séance du 3 oct., 1894.
- LAFFLE. Surgery of glands in the neck. *Brit. Med. Journ.*, Mar. 14, 1896.
- LAURENS. Hernie intrabuccale des glandes sousmaxillaires. *Presse Méd.*, Jan. 29, 1895.
- LAURANI. Fistule vélo-palatine et respiration buccale. *Journ. des Sc. Méd.*, Lille, 1894, No. 28.
- LECLAINCHE. Actinomycose et botryomycose. *Méd. Mod.*, Jan. 31, 1894.
- LE DENTU. De l'ostéotomie du maxillaire supérieur combinée avec la section de la cloison nasale, comme temps préliminaire de certaines uranostaphylorraphies. *Bull. Méd.*, April 3, 1895.
- LE DENTU. Leucoplasie et épithélioma. *Congrès franç. de Chir.*, Lyon, 1894, 9.
- LEMOINE. Étude bactériologique de cent dix-sept cas d'angines scarlatineuses. *Soc. Méd. des Hôpitaux*, Dec. 20, 1895.
- LEMOYNEZ. Prophylaxie et traitement des amygdalites. *Méd. Contemporaine*, Jan. 15, 1894.
- LEMOYNEZ, HELME, et BARMER. Un cas d'amygdalite chronique colibacillaire. *Bull. et Mém. de la Soc. Méd. des Hôp. de Paris*, June 28, 1894.
- LELOUX. La stomatite aphteuse doit être dénommée stomatite herpétique. *Journ. de Clin. et Thérap. Infant.*, May 6, 1895.
- LELUTTE et MESLAY. Neurasthénie. Mort subite. Dilatation congénitale de l'œsophage et des ventricules lœuxaux. *Bull. de la Soc. Anat. de Paris*, Vol. 6, Feb. and Mar., 1894.
- LELUTTE. Miel perforant buccal dans le tabes. *Bull. et Mém. de la Soc. Méd. des Hôp. de Paris*, July 29, 1894.
- LELUTTE. Tumeur bénigne de la langue. *Bull. de la Soc. Anat. de Paris*, fasc. 5, Feb., 1894.
- LEVLEY et GHICA. Mort subite au moment de l'ouverture d'un abcès parapharyngien. *Journ. de Clin. Int.*, Dec. 17, 1895.
- LICHOWITZ. De l'ablation des amygdales hypertrophiques avec l'anse électrothermique. *Méd. Moderne*, Jan. 30 and Feb. 2, 1895.
- LICHOWITZ. Angioma of the pharynx. *Monats. für Ohrenheilk.*, 1895, No. 9.

- LIVON. Note sur l'innervation du voile du palais. *Marseille Méd.*, June 1, 1894.
- LOGUCKI, A. Ein Beitrag zur Aetiologie des peritonsillaren Abscesses. *Archiv für Laryngologie und Rhinologie*, herausgegeben, Band 4. Heft 2.
- LUKASIEWICZ. On erythema exudativum multiforme in the mucous membrane of the mouth. *Wiener Klin. Woch.*, 1896, No. 23.
- LYON. Antisepsie buccale. *Ann. de Méd., Scient. et Prat.*, July 11 and 25, 1894.
- LYON. Traitement des glossites. *Ann. de Méd., Scient. et Prat.*, July 25, 1895.
- MAGNAN. Des symptômes pharyngés du tabes vrai. *Thèse de Lyon*, Jan., 1894.
- MARAGE. Serre-neud électrique automatique pouvant servir d'amygdalotomie. *Gaz. des Hôp.*, Nov. 28, 1895.
- MARFAN. L'exploration des voies respiratoires chez les enfants du premier âge. *Bull. Méd.*, July 4, 1894.
- MARIËN. Contribution à l'étude des affections de l'amygdale linguale et plus spécialement de l'amygdalite aiguë. *Thèse de Paris*, July, 1894.
- MARTIN. De l'anesthésie par le bromure d'éthyle. *Soc. de Chir. de Paris*; Séance du 4 juillet, 1894.
- MARTTSA. Perforation palatine chez une fille de quinze ans par syphilis vaccinale contractée à l'âge de deux ans. *Rev. d'Hyg.*, July, 1895.
- MASSOIN. Influence de l'extirpation du corps thyroïde sur la toxicité urinaire. *Comptes-rendus Hebd. de la Soc. de Biol.*, Feb. 9, 1894.
- MATIGNON. Du phlegmon sublingual (angine de Ludwig). *Arch. de Méd. et Chir. Milit.*, April, 1894.
- MAURET. Pathogénie de la stomatite mercurielle. *Acad. de Méd. de Paris*; Séance du 24 juillet, 1894.
- MENDEL. Amygdalite ulcéreuse chancreiforme. *Soc. franç. de Lar. et Otol.*, Paris, May 3, 1895.
- MENDEL. De l'angine granuleuse. *Méd. Mod.*, Feb. 27, 1895.
- MENDEL. Glossite syphilitique tertiaire. *Soc. franç. de Derm. et Syphil.*; Séance du 12 juillet, 1894.
- MENDEL. Glossite syphilitique à leucoplasie lenticulaire. *Soc. franç. de Derm. et Syphil.*; Séance du 15 novembre, 1894.
- MENDEL. Maladies multiples de la bouche et de la langue. *Soc. franç. de Derm. et Syphil.*; Séance du 8 mars, Paris, 1894.
- MENDEL. Un cas d'angine copahioqué. *Bull. Méd.*, Mar. 25, 1894.
- MENDEL. 1. Tuberculose linguale et glossite dentaire. 2. Gangrène de la langue d'origine très probablement syphilitique. *Soc. franç. de Derm. et Syphil.*, Dec. 13, 1894.
- MERMET. Syphilides bucco-pharyngiennes et abcès rétro-pharyngien. *Gaz. des Hôp.*, Mar. 12, 1895.
- MESLAY. Abcès de l'espace maxillo-pharyngien. Ulcération de l'artère carotide interne. Ouverture de la poche purulente dans le pharynx et dans le conduit auditif externe sans lésion de la membrane du tympan. *Bull. de la Soc. Anat. de Paris*, fasc. 26, Dec., 1894.
- MEYER, EDMUND. Bakteriologische Befunde bei Angina lacunaris. *Archiv für Laryngologie und Rhinologie*, herausgegeben von Dr. B. Fränkel, Band 4, Heft 1.
- MEYJES. Un cas d'anomalie congénitale unilatérale du voile du palais. *Rev. de Lar., Otol., et Rhin.*, April 15, 1894.
- MIXTER, S. J. Tumours of the parotid appearing in faucial region. *The Boston Med. and Surg. Journ.*, Feb. 6, 1896.

- M'KENNAN. Foreign body in the tongue. *Med. Age*, Jan. 25, 1896.
- MONNIER. De l'électro-amygdalotomie comme moyen d'ablation du amygdales sans hémorrhagie. *France Méd.*, Mar. 15, 1895.
- MONTAZ. Lymphadénome du pharynx. *Dauphiné Méd.*, July, 1894.
- MORESTIN. Anomalies des artères et veines rénales. Anomalie de la thyroïdienne inférieure chez le même sujet. *Bull. de la Soc. Anat. de Paris*, fasc. 12, June and July, 1894.
- MORESTIN. Anomalie de l'artère linguale. *Bull. de la Soc. Anat. de Paris*, fasc. 19, Oct., 1894.
- MORROW. Parotitis in pelvic disease. *Montreal Med. Journ.*, March and April, 1896.
- MOUNIER. Des abcès de l'amygdale linguale. *Soc. franç. de Lar., Otol., et Rhin.*; Séance du 2 mars, 1894.
- MOULLIN. De la stomatite mercurielle grave. Thèse de Paris, June, 1894.
- MOURA. Humages-Humoirs. *Bull. et Mém. de la Soc. de Lar., Otol., et Rhin. de Paris*, May, 1894.
- MOURL. Considérations sur la pharyngite granuleuse. *Bull. Méd.*, Feb. 20, 1895.
- MOURE. De l'amygdalite lacunaire ulcéreuse aiguë. *Soc. franç. de Lar. et Otol.*, Paris, May 3, 1895.
- MOURE. Langue noire. *Soc. d'Anat. et Physiol. de Bordeaux*, Jan. 21, 1895.
- MURSELL. Suppurative parotitis following gonorrhœa. *Brit. Med. Journ.*, Feb. 1, 1896.
- NETTER. Présence du streptocoque pyogène dans la bouche des sujets sanis. *Bull. et Mém. de la Soc. Méd. des Hôp. de Paris*, May 31, 1894.
- NETTER. Présence fréquente des pneumocoques virulents dans la bouche des sujets convalescents d'érysipèle de la face. *Bull. et Mém. de la Soc. Méd. des Hôp. de Paris*, July 26, 1894.
- NEWMAN. Malignant disease of tonsil—operation. *Glas. Med. Journ.*, April, 1896.
- NICOLL, JAMES H. The etiology and treatment of chronic enlargements of lymphatic glands, with special reference to those of the neck. *Glas. Med. Journ.*, Jan., 1896.
- NISSIM. Des troubles de la parole dans les névroses (hystérie, chorée, paralysie agitante). *Gaz. des Hôp.*, April 13, 1895.
- ONODI. Argyrose. *Rev. de Lar., Otol., et Rhin.*, Jan. 1, 1894.
- ORACHOWITZ (Lovacz). Treatment of stomatitis ulcerosa. *Ther. Monats.*, No. 12, 1894.
- PANAS. Daeryadénite double d'origine amygdalienne. *Sem. Méd.*, 1895, p. 37.
- PEPIN. De la contagiosité de l'amygdalite aiguë. Thèse de Paris, Mar., 1894.
- PÉRIER. Traitement des angines chez l'enfant. *Gaz. Med. de Paris*, Mar. 4, 1894.
- PELLE. Streptocoque et menstruation. *Gaz. Hebdom. de Méd. et Chir.*, Feb. 2, 1895.
- PELLE. Sur quelques modes peu connus de contagion de la tuberculose par voie buccale. *Rev. de la Tuberc.*, Oct., 1894.
- PELLE. Contribution à l'étude de la stomatite aphtheuse. Thèse de Paris, fasc. 18, Oct., 1894.
- PHOCAS. Phlegmon cervical supérieur et angine de Ludwig. *Rev. Int. de Rhin., Otol., et Lar.*, Jan. 10, 1894.

PIÉDALLU. Nouveau traitement des angines et laryngites pseudo-membraneuses. Bull. Gén. de Thérap., April 8, 1894.

PLICQUE. Précis de clinique thérapeutique. Un vol. de 592 pages. G. Steinheil, éditeur, Paris, 1894.

PONCET. L'actinomycose à Lyon. Acad. de Méd. de Paris; Séance du 22 jan., 1895.

POIRIER. Résection du maxillaire inférieur, pour cancer, suivie de prothèse immédiate d'après le procédé de Martin (de Lyon). Soc. de Chir. de Paris; Séance du 17 oct., 1894.

POUCHIN. Brumure d'éthyle. Thèse de Paris, April, 1894.

PURVES, STEWART. Tuberculosis of the tonsil. Brit. Med. Journ., May 4, 1895.

QUÉNU. Tumeur du voile du palais. Soc. de Chir. de Paris; Séance du 3 oct., 1894.

RAOULT. Des accidents inflammatoires d'amygdale linguale d'origine dentaire et buccale. Soc. franç. de Lar. et Otol., Paris, May 1, 1895.

RAUGÉ. Le choix des anesthésiques. Bull. Méd., June 27, 1894.

RAUGÉ. Les éléments du langage articulé. La Voix, Parlée et Chantée, Mar., 1895.

RAYNAUD. De la langue grippale. Bull. et Mém. de la Soc. Méd. des Hôp. de Paris, Feb. 8, 1894.

RENAULT. Angio-kératome des muqueuses labiale et buccale. Soc. franç. de Derm. et Syphil.; Séance du 12 juillet, 1894.

RENAULT et SALMON. Note pour servir à l'histoire de la parotidite double chronique. Bull. et Mém. de la Soc. Méd. des Hôp. de Paris, Jan. 25, 1894.

REVERDIN. Incision des abcès froids rétropharyngiens par la région antéro-latérale du cou. Congrès franç. de Chir., Lyon, Oct., 1894.

RIESMAN, D. Xerostoma (dry mouth), with the report of a case. Philadelphia Polyclinic, March 7, 1896.

RIPAULT. Considérations étiologiques et séméiologiques sur la dysphagie. Gaz. Méd. de Paris, Sept. 29, 1894.

ROBERTS, J. B. A case of papilloma of the tonsil; removal. Arch. of Otol., Jan., 1896.

ROCAZ. Infection générale par le streptococque consécutive à une angine catarrhale chez un enfant d'un an. Arch. Clin. de Bordeaux, Oct., 1894.

ROCHARD. Traitements opératoires des abcès chauds rétropharyngiens. Méd. Inf., Jan., 1894, No. 1.

ROLLAND. De la tuberculose intralinguale. Thèse de Lyon, 1895.

ROMNICEANO. La sérothérapie antidiphthéritique. Accidents. Mercredi Méd., April 24, 1895.

ROUX. Contribution à l'étude des calculs amygdaliens. Thèse de Bordeaux, Jan., 1895.

SABATIER. Happeur lingual. Lyon Méd., Dec. 9, 1894.

SACAZE. Amygdalite lacunaire caséuse de nature tuberculeuse (foyer primitif). Arch. Gén. de Méd., Jan., 1894.

SAUVAGE. Essai sur les abcès froids de la langue. Thèse de Paris, Dec., 1894.

SCHEPFERGRELL. Papilloma of the soft palate. N.Y. Med. Journ., Vol. LXIII, pp. 163, 470.

SCHIFFERS. Epithélioma de la luette et de l'arc palatin gauche. Rev. Int. de Rhin., Otol., et Lar., Mar. 25, 1894.

SCHMIEGELOW, E. Beitrag zur Pathogenese der sogenannten schwarzen Zunge.

Archiv für Laryngologie und Rhinologie, herausgegeben von Dr. B. Fränkel, Band 4, Heft 2.

SEGOND et TERRIER. De l'anesthésie par le bromure d'éthyle. Soc. de Chir. de Paris; Séances des 2 et 9 mai, 1894.

SEIFERT. Perte de substance congénitale d'un pilier palatin. Rev. de Lar., Otol., et Rhin., Feb. 15, 1894.

SENDZIAK. Contribution à l'étiologie de la soi-disant langue noire. Rev. de Lar., Otol., et Rhin., April 1, 1894.

SENDZIAK. Cas extraordinaire de syphilis des amygdales. Rev. de Lar., Otol., et Rhin., May 1, 1895.

SERGENT. 1. Lymphadémie généralisée. 2. Dégénérescence calcaire du lobe gauche du corps thyroïde, et atrophie du reste de la glande dans un cas de psoriasis arthropathique terminé par myxoedème fruste. Bull. de la Soc. Anat. de Paris, fasc. 6, Feb. and Mar., 1894.

SOLLIER. Réflexes pharyngien et massétérin dans la paralysie générale. Ann. Méd. Psychol., March and April, 1894.

SPRINGER. Coqueluche grave chez un enfant d'un mois traitée par trois cent lains froids sinapisés. Guérison. Essai de pathogénie. Union Méd., June 2, 1894.

SOUVILLE. Cancer fissuraire de la langue. Extirpation totale de l'organe. Guérison. Journ. des Sc. Méd. de Lille, 1894, No. 19.

SUCHANNEK, H. Ueber Skrofulose, ihr Wesen und ihre Beziehungen zur ruhenden Tuberkulose der Mandeln, Halslymphdrüsen und benachbarten Organe. Bresgen's Sammlung, Heft 11.

TAYLOR, SEYMOUR. Ludwig's angina. Brit. Med. Journ., March 14, 1896.

TENNESON. Des stomatites. La perlèche. L'impétigo. Rev. Gén. de Clin. et Thérap., Dec. 15, 1894.

TENNESON. Stomatites aiguës diffuses. Rev. Gén. de Clin. et Thérap., Jan. 12, 1895.

TENNESON. Stomatite aphteuse ou herpès buccal. Rev. Gén. de Clin. et Thérap., Feb. 16, 1895.

THÉBAND. Étude sur la glossite parenchymateuse aiguë. Thèse de Paris, June, 1894.

THIÉRY. 1. Note sur un cas de prothèse immédiate du maxillaire inférieur. 2. Note sur une malformation singulière de la voûte palatine d'origine congénitale. Bull. de la Soc. Anat. de Paris, fasc. 11, July, 1894.

THOST. Ueber Chronischen Pemphigus der Schleimhäute. Monats. für Ohrenheilk., April, 1896.

TILLAUX. Indications et technique de la staphylorrhaphie. Rev. Gén. de Clin. et Thérap., Feb. 14, 1894.

TOUSSAINT. La leucoplasie bucco-linguale prétabétique. Rev. Gén. de Clin. et Thérap., Feb. 17, 1894.

TSEGIN. Anastomosis in the tongue. Archiv. für Anat. und Physiol., 1894.

TUCKER. De l'éclairage des cavités de la face. Thèse de Paris, Mar., 1894.

TUFFIER. Perfectionnements à apporter dans le manuel opératoire de la résection du maxillaire supérieur. Conservation des plans fibro-muqueux, auto-plastie immédiate. Gaz. Méd. de Paris, Dec. 8, 1894.

TUSSAN. De l'étiologie de la tuberculose des amygdales et de son traitement. Lyon Méd., April 22, 1894.

VACHER. De la pharyngite rétronasale. Rev. de Lar., Otol., et Rhin., Aug., 1894.

VARIOI. Épithélioma de la langue chez un garçon de onze ans. Journ. de Clin. et Thérap. Infant., April 26, 1894.

VARIOT. Sur le traitement de la coqueluche. *Journ. de Clin. et Thérap. Infant.*, Mar. 22, 1894.

VERMAUX. Traitement des abcès rétro-pharyngiens, incision par le cou. Thèse de Lille, 1895.

VIGNOT. Diagnostic et traitement de la coqueluche. *Rev. Gén. de Clin. et Thérap.*, July 14, 1894.

VILLECOURT. Des désordres produits par l'hypertrophie de la quatrième amygdale (amygdale de la langue) chez une hystérique. *Gaz. des Hôp.*, Jan. 9, 1894.

WADE, SIR W. Remarks on tonsillitis as a factor in rheumatic fever. *Brit. Med. Journ.*, April 4, 1896.

WAGNIER. Brûlure du pharynx, du larynx, et de l'œsophage par ingestion d'acide sulfurique. *Rev. de Lar., Otol., et Rhin.*, Oct. 15, 1894.

WAGNIER. Deux nouveaux cas de guérison de la pharyngo-mycose leptomycotique par l'acide chromique anhydre. *Rev. de Lar., Otol., et Rhin.*, Aug., 1894.

WALDVOGEL. Bacteriological and anatomico-pathological researches of infectious pharyngo-laryngitides. Inaugural dissertation, Göttingen, 1894.

WALKER, DOWNIE. Aprosexia, convulsions, and adenitis, dependent on pathological changes in the faucial, lingual, and pharyngeal tonsils. *Glas. Med. Journ.*, Jan., 1896.

WEISS. Quelques considérations sur le cancer de l'arrière gorge. *Rev. Méd. de l'Est*, Jan. 1, 1894.

WERMEILLE. Stomatite et rhinite impétigineuses dans la rougeole ; leurs rapports avec la broncho-pneumonie. Thèse de Paris, June, 1894.

WICKHAM. Dermate exfoliatrice secondaire à un eczéma. Cachexie avec purpura et gangrène de la peau et des muqueuses. *Soc. franç. de Derm. et Syphil.* ; Séance du 8 mars, Paris, 1894.

WICKHAM. Ulcérations buccales tabétiques. *Soc. de Derm. et Syphil.* ; Séance du 18 jan., Paris, 1894.

WIDAL. Angine phlegmoneuse avec coli-bacille. *Bull. et Mém. de la Soc. Méd. des Hôp. de Paris*, Feb. 15, 1894.

WIDAL. Présence des streptocoques dans la bouche normale. *Bull. et Mém. de la Soc. Méd. des Hôp. de Paris*, June 7, 1894.

WIDAL et BEZANÇON. Les streptocoques de la bouche normale et pathologique. *Bull. et Mém. de la Soc. Méd. des Hôp. de Paris*, Aug. 2, 1894.

WILSON, N. L. Chronic disease of the tonsils. *N.Y. Med. Journ.*, Vol. LXIII, p. 509.

WOAKES. Tongue depressor. *Brit. Med. Journ.*, Feb. 29, 1896.

ZILGIEN. Angine catarrhale aiguë et angine de poitrine. *Rev. Méd. de l'Est*, Mar. 1, 1894.

NOSE AND NASO-PHARYNX, ETC.

ABERCROMBIE. Valerianate of zinc in hay fever. *Brit. Med. Journ.*, April 28, 1896.

ADENOT. Ostéome des fosses nasales ; crises épileptiformes, abaissement du nez, ablation de la tumeur, guérison. *Lyon Méd.*, April 28 and May 5, 1895.

ARSLAN. Contribution statistique à l'étude des végétations adénoïdes du rhino-pharynx. *Ann. Mal. de l'Oreille*, Dec., 1895.

AVEILLIS. Das acute Kieferhöhlenempyem und die Frage der Selbstheilung desselben. Archiv für Laryngologie und Rhinologie, herausgegeben von Dr. B. Fränkel, Band 4, Heft 2.

BALDEWEIN, RUDOLF. The rhinology of Hippocrates. Zeitschrift für Ohrenheilk., Band 28, Heft 2.

BAR. Considérations sur l'ablation des végétations adénoïdes. Nice Méd., Dec., 1895.

BARATOUX. Des corps étrangers du sinus maxillaire. Rev. de Lar., Otol., et Rhin., Mar. 1, 1895.

BARATOUX. Rapport sur la fréquence des tumeurs adénoïdes dans les écoles de la ville de Paris. Davy, Paris, 1895.

BARETTE. Note sur un cas d'empyème du sinus frontal. Année Méd. de Caen, June 15, 1894.

BARK, J. Rhinoliths. Liverpool Med. Chir. Journ., Jan., 1896.

BAUMGARTEN. Nez antérieur double ; deux cloisons cartilagineuses et trois narines. Rev. de Laryng., Jan. 1, 1894.

BAUMGARTEN. Statistique de 250 cas d'épistaxis. Rev. Int. de Rhin., Otol., et Lar., Aug. 14, 1894.

BAUMGARTEN, EGMONT. Echter und falscher Choanenverschluss. Monats. für Ohrenheilk., Jan., 1896.

BAYER. Glycosurie d'origine nasale. Guérison par le rétablissement de la respiration nasale. Rev. de Lar., Otol., et Rhin., Oct. 1, 1894.

BAZENERGE. Étude clinique sur la syphilis nasale acquise. Thèse de Paris, April, 1894.

BEAUMONT. Des polypes muqueux des fosses nasales. Étiologie, traitement. Thèse, Paris, 1895.

BEAUSOLEIL. Étude sur l'étiologie et la pathogénie du coryza caséeux. Rev. de Lar., Otol., et Rhin., Dec. 15, 1894, and Jan. 1, 1895.

BEAUSOLEIL. Hémorrhagie secondaire consécutive à l'ablation des végétations adénoïdes. Soc. franç. de Lar., Paris, May 1, 1895.

BEAUSOLEIL. 1. Occlusion congénitale ossense des arrière-fosses nasales. Oblitération complète à droite, incomplète à gauche. 2. Végétations adénoïdes du naso-pharynx. Journ. de Méd. de Bordeaux, 1894, No. 27.

BEAUSOLEIL. Présentation de végétations adénoïdes. Considérations sur ces tumeurs. Journ. de Méd. de Bordeaux, No. 34, 1894.

BERDAL et JOYLE. Acné hypertrophique. Presse Méd., June 22, 1895.

BERENS, PASSMORE. Ichthyol in fetid atrophic rhinitis, and in laryngeal tuberculosis. Rep. Manhattan Eye and Ear Hosp., Jan., 1895.

BERGER. Rhinoplastie par la méthode Italienne. Médecine Moderne, March 4, 1896.

BERGER. Traitement des polypes naso-pharyngiens. Rapport sur une observation de Calot. Soc. de Chir. de Paris, Séance du 2 jan., 1895.

BERGER. Troubles oculaires dans les affections du sinus sphénoïdal. Soc. franç. d'Ophthal., May 9, 1894.

BERNAL. Des luxations de la cloison cartilagineuse des fosses nasales. Thèse de Bordeaux, 1895.

BEYER. Polype naso-pharyngien. Soc. de Chir. de Paris, July 15, 1894.

BLEYER. Massage électro-vibatoire des cornets. Rev. Int. de Rhinol., V., p. 21, 1895.

BLEYER, J. M. Valeur du traitement aéro-tonique dans les affections du nez, de la gorge, et de la poitrine, avec quelques remarques au sujet de bonnes stations d'hiver. Rev. Int. de Rhin., etc., April 25, 1894.

BLONDIAN. De l'importance du coryza au point de vue étiologique. *Rev. Int. de Laryng., Rhin., etc.*, May 10, 1894.

BLONDIAN. Du massage vibratoire dans les affections nasales. *Rev. Int. de Laryng. et Rhin.*, June 25, 1894.

BONAIN. Polypes muqueux et sarcomes des fosses nasales. *Soc. franç. de Lar.*, May 3, 1895.

BONAIN. Synéchie osseuse et myxôme kystique de la fosse nasale droite. *Rev. de Lar., Otol., et Rhin.*, Mar. 1, 1895.

BRINDEL. Dent implantée à l'entrée de la fosse nasale droite, avec troubles réflexes (accès de toux et spasmes laryngés); avulsions, guérison. *Rev. de Lar., Otol., et Rhin.*, Jan. 1, 1895.

BRINDEL. Myxôme des fosses nasales implanté sur la cicatrice d'un lymph-adénome. *Journ. Méd. Bordeaux*, June 12, 1896.

BROCA et PILLIET. Angiôme de la sous-narine. *Bull. de la Soc. Anat. de Paris*, fasc. 16, July, 1894.

BRUNOW. Le chancre syphilitique des fosses nasales. Thèse de Lyon, 1895.

BURGER. Du diagnostic de la suppuration du sinus maxillaire. *Rev. de Laryng.*, Jan. 1, 1894.

CAPDEPONT. Contribution à l'étude de l'empyème du sinus maxillaire. Thèse de Paris, July, 1894.

CASTEX. 1. Deux cas de rhinosclérome. 2. Fissure des narines. *Soc. franç. de Lar.*, May 1, 1894.

CASTEX. Technique et résultats opératoires dans les tumeurs adénoïdes du pharynx. *Soc. de Méd. et Chir. Prat.*, Feb. 1. *Méd. Moderne*, Feb. 21, 1894.

CASTEX. Tumeurs rares du naso-pharynx. *France Méd.*, June 7, 1895.

CASTEX et MALHERBE. Contribution à l'étude des tumeurs adénoïdes. *Bull. Méd.*, March 4 and 7, 1894.

CASTEX et MALHERBE. Recherches sur la croissance post-opératoire dans les tumeurs adénoïdes. *Presse Méd.*, March 31, 1894.

CAZAUX. Asthme et opération chirurgicale. *Rev. Gén. de Clin.*, July 25, 1894. *Soc. Méd. et Chir. de Paris*, May 8, 1894.

CHABORY. Anémie d'origine nasale. *Soc. franç. de Lar.*, May 2, 1894.

CHABORY. Les facteurs de l'anémie dans les maladies des voies respiratoires. *Progrès Méd.*, June 16, 1894.

CHAMPIONNIÈRE. Acné hypertrophique du nez. *Acad. de Méd.*, Séance du 9 avril, Paris, 1895.

CHAMBELLAN. Une observation de rhinite fibrineuse; coexistence de végétations adénoïdes; diagnostic avec la diphtérie. *Journ. de Clin. et Thérap. Infant.*, July 12, 1894.

CHAPUIS. Du chancre syphilitique de la muqueuse pituitaire. *Gaz. des Hôp.*, Oct. 13, 1894.

CHAPUT. Restauration du nez par soutènement. *Soc. de Chir. de Paris*, Séances des 19 et 26 déc., 1894.

CHAUMIER. Ce qu'il faut penser du traitement des végétations adénoïdes par la résorcine. *Méd. Moderne*, Dec. 25, 1895.

CHAUMIER. De l'utilité de la connaissance des tumeurs adénoïdes du pharynx nasal pour les médecins d'enfants. *Méd. Infant.*, Dec. 15, 1894.

CHAUVEL. Rhinoplastie avec support. *Acad. de Méd. de Paris*, July 24, 1894.

CLÉMENT. Étude clinique sur la rapport de quelques affections des fosses nasales avec les organes respiratoires inférieurs. Thèse, Paris, April, 1895.

COLLIER, MAYO. L'étiologie de l'obstruction nasale. *Pratique Méd.*, Nos. 16, 17, and 18, 1896.

COMBE. Corps étranger du sinus maxillaire. Elimination spontanée par les

fosses nasales après quatre ans et un mois de séjour. Soc. franç. de Lar., May 1, 1894.

COMBE et DUBOUSQUET-LABORDIÈRE. Tumeur orbitaire double simulant une tumeur maligne due à une infection d'origine nasale ; guérison par l'ablation du polypes du nez. Bull. Soc. franç. d'Otol., XI., p. 337.

COOPER, A. Snuffles in acquired syphilis. Brit. Med. Journ., Feb. 22, 1896.

COULTER. Empyema of antrum. Med. Age, Jan. 25, 1896.

COURTADE. Des névroses réflexes de la muqueuse nasale et particulièrement de l'asthme. Soc. de Méd. et Chir. Prat., April 19, 1894. Journ. de Méd. de Paris, May 27, 1894.

COURTADE. Étude sur l'emploi de la pince ou de la curette dans l'opération des végétations adénoïdes. Journ. de Méd. de Paris, March 18, 1894.

COURTADE. Traitement du sycosis du vestibule des fosses nasales. Bull. Gén. de Thérap., June 8, 1894.

DAAB, HANS. Ein Apparat zur Ausspritzung der Nase. Archiv für Laryngologie und Rhinologie, herausgegeben von Dr. B. Fränkel, Band 4, Heft 1.

DADYSETT, H. J. Turlinotomy, and its effects upon affections of the ear. Indian Med. Chir. Rev., Jan., 1896.

DECOURT. La rhinite hypertrophique chez les enfants, les complications, son traitement. Thèse de Bordeaux, 1894.

DEDIEU. Contribution à l'étude clinique de la rhinite purulente infantile. Thèse de Paris, Feb., 1895.

DE LA COMBE JUDET. Végétations adénoïdes et dégénérescence. Thèse de Bordeaux, 1894.

DELIE. Traitement des polypes muqueux des fosses nasales. Soc. franç. de Lar., Rev. Int. de Rhinol., June 10, 1894.

DELOUME. Sur les appareils métalliques de soutien du nez. Soc. de Chir. de Paris, Séance du 9 jan. Gaz. des Hôp., 1895.

DIDSBURY. Contribution à l'étude des rhinolithes. Thèse de Paris, June, 1894.

DOMEQ. Du traitement de l'épithéliome de la peau, des paupières, et du nez par le bleu de méthyle. Thèse de Paris, Feb., 1895.

DREYFUSS. Diseases of the brain and its adnexa in consequence of nasal suppuration. Jena, 1896.

DU FOUGERAY, HAMON. Un cas de rhinite purulente aiguë primitive infantile à staphylocoques ; guérie par l'emploi de l'huile mentholée. Ann. des Mal. de l'Oreille, Dec., 1895.

DUPONT. Du myxosarcome des fosses nasales. Thèse de Lyon, 1895.

DUTAUZIER. De l'asthme survenant chez les enfants porteurs de végétations adénoïdes. Thèse, Paris, April, 1894.

DUVAL et GARNAULT. L'organe de Jacobson des chiroptères. Comptes-rendus Hebd. des Séances de la Soc. de Biol., June 28, 1895.

ENDLITZ. Syphilis héréditaire tardive. Syphilides ulcéreuses du front, du nez, de la lèvre supérieure. Nécrose des os du nez. Soc. franç. de Derm. et Syphil. ; Séance du 10 jan., 1895.

ENDLITZ. Chancre induré de la cloison sous-nasale. Soc. franç. de Derm. et Syphil., Feb. 14, 1895.

ESCAR. Considérations anatomiques relatives à l'apponévrose de la cavité naso-pharyngienne et à l'espace rétro-pharyngé. Presse Méd., June 15, 1895.

ESCAR. Evolutions et transformations anatomiques de la cavité naso-pharyngienne. Thèse, Paris, June, 1894.

ESCAR. De l'ablation de l'amygdale de Luschka ; indications et contre-indications. Arch. Méd. de Toulouse, 1895, No. 3.

ESTICCI. De l'ozène et de son traitement par le nitrate d'argent et le chlorure de zinc. Thèse, Paris, July, 1894.

FAGE. Un cas d'iritis d'origine ozéneuse. Soc. franç. d'Ophthal., Paris, May, 1895.

FARBER. Ethmoiditis suppurativa and chronica; cause, diagnosis, and treatment, with the anatomy of the ethmoid. Ann. Ophth. and Otol., Vol. V., p. 112.

FAUVEL. De l'emploi des solutions de chlorure de zinc dans les affections nasales, pharyngées, et laryngées. Bull. Soc. franç. d'Otol., XI., p. 155, 1895.

FICANO, G. (Palermo). A case of poisoning following the application of cocaine in non-toxic doses. Bollettino delle Malattie dell' Orecchio, etc., Feb., 1896.

FRECHE. Occlusion complète de l'arrière cavité des fosses nasales. Journ. de Méd. de Bordeaux, May 6, 1894.

FREUDENTHAL, W. Ein Nasenbeutel. Archiv für Laryngologie und Rhinologie, herausgegeben von Dr. B. Fränkel, Band 4, Heft 2.

FREUDENTHAL, W. Rhino-scleroma. N.Y. Med. Journ., Vol. LXIII., p. 133.

FROMMAGET. Iritis consécutive à un empyème de l'antre d'Highmore. Bull. et Mém. de la Soc. d'Ophthal., Lar., Otol., de Bordeaux et du Sud-Ouest. Nos. II and 12, 1893.

FURST. Treatment of rhagades and coryza sicca in children. Therap. Monats., 1896, No. 6.

GALIPPE. Des rhinolithes. Calculs d'amygdale et du larynx. Otolithes. Journ. des Conn., Méd., April 5, 12, 19, 1894.

GAREL. Deux cas de chancre primitif de la cloison nasale. Rev. de Lar., Otol., et Rhin., July 15, 1895.

GARNAULT. Comment doit-on opérer les végétations adénoïdes? Peuvent-elles recidiver après l'opération? Clin. franç., March 31, 1894.

GARNAULT. Contribution à l'étude de la morphologie des fosses nasales. L'organe de Jacobson. Comptes-rendus Hebd. des Séances de la Soc. de Biol., May 3, 1895.

GARNAULT. Le massage vibratoire et électrique des muqueuses; sa technique, ses résultats dans le traitement des maladies du nez, de la gorge, des oreilles, et du larynx. Soc. d'Ed. Scient., Paris, 1894, 1 volume, 156 pages.

GILLIAN, GUSTAV. Zur Anatomie der Nase menschlicher Embryonen. Archiv für Laryngologie und Rhinologie, herausgegeben von Dr. B. Fränkel, Band 4, Heft 1.

GIRANDEAU. Tabes bulbaire, ulcérations trophiques du nez et des oreilles. Presse Méd., Oct. 27, 1894.

GLEITSMANN, J. W. Diseases of the accessory sinuses of the nose. Ann. Ophth. and Otol., Vol. V., p. 364.

GLEITSMANN, J. W. Ueber Behandlung von Septumdeviationen mittelst der Trephine und der Methode von Asch. Archiv für Laryngologie und Rhinologie, herausgegeben von Dr. B. Fränkel, Band 4, Heft 1.

GOLDSTEIN, S. Adjustable, self-retaining nasal speculum. N.Y. Med. Journ., Vol. LXIII., p. 159.

GOMPERTZ. Angeborene Abnormität an den pharyngealen Tubenostien, und Divertikelbildung am Rachendach. Monats. für Ohrenheilk., March, 1896, p. 135.

GOODWILLIE. Tumeurs fibreuses du naso-pharynx et méthode de traitement à l'aide de l'électro-cautère. Rev. Int. de Rhin., Otol., et Lar., May 10, 1895.

GORIS. Sur quatre opérations de rhinoplastie, avec courtes remarques sur la technique opératoire. Rev. Int. de Rhin., Otol., et Lar., Dec. 10, 1894.

GOUGUENHEIM. Déviations de la cloison du nez. Semaine Méd., Feb. 21, 1895.

GORGUENHEIM. Polypes muqueux des fosses nasales. *Union Méd.*, Oct. 11, 1894.

GOTLY. Des corps étrangers du sinus maxillaire, et, en particulier, de leur élimination par l'hiatus semi-lunaire. *Arch. Int. de Lar., Rhin., et Otol.*, Jan. and Feb., 1895.

GRADENIGO. On serum therapy in ozæna. *Archivi Ital. di Otologia*, 1896, Vol. IV., fasc. 2.

GRAHAM, G. W. A tooth growing in the nose. *The Charlotte Med. Journ.*, Feb., 1896.

GRALICH. Les infections d'origine nasale. Thèse de Paris, July, 1894.

GRANT, DUNDAS. Persistence de suppuration nasale malgré un traitement prolongé. *Soc. franç. de Lar. et Otol.*, Paris, May 2, 1895.

GRANT, DUNDAS. Trois obs. de sinusites nasales offrant des points de vue instructifs. *Bull. Soc. franç. d'Otol.*, XI., p. 136, 1895.

GRELLETY. Traitement du coryza. *Soc. de Thérap.*, *Bull. Gén. de Thérap.*, June 8, 1894.

GRIMM. Foreign bodies in the nose. Inaugural thesis. Berlin, 1895.

GUÉMENT. De l'influence exercée par la présence de végétations adénoïdes sur l'augmentation du volume des amygdales. *Ann. de la Polyclin. de Bordeaux*, No. 18, 1894.

GUILBERT. Du traitement rhino-pharyngien dans les affections oculaires. *Soc. franç. d'Ophtal.*, May 9, 1894. *Recueil d'Ophtal.*, July, 1894.

GUILLEAUME. Des végétations adénoïdes, et en particulier sur leur diagnostic et leur traitement avec la pulpe de l'index. *Soc. franç. de Lar.*, *Rev. de Lar.*, Nov. 16, 1894.

GUILLEAUME. Du touche naso-pharyngien. *Soc. Méd. de Reims*, May 17. *Union Méd. du Nord-Est*, July, 1894.

GUILLEAUME. Végétations adénoïdes du pharynx nasal ayant déterminé des accidents cérébelleux réflexes. Écrasement. Guérison. *Union Méd. du Nord-Est*, July, 1894.

GUILPIN. Contribution à l'étude de l'ozène et de la rhinite atrophique simple. Thèse de Paris, Jan., 1895.

GUYE. Des polypes des choanes. *Rev. Int. de Rhin., Otol., et Lar.*, Oct. 10, 1894.

HAGEDORN. Relation between general diseases and disease of the nose and throat to ear affections. *Bresgen's Sammlung*, Band 1, No. 10.

HALL, HAVILLAND. Dangers of cocaine. *Brit. Med. Journ.*, Feb. 8, 1896.

HALLOPEAU et JEANSELME. Contribution à l'étude des suppurations associées aux syphilomes tertiaires du fosses nasales. *Ann. de Derm. et Syphil.*, April, 1894.

HARING. Nasal sarcoma. *Brit. Med. Journ.*, Feb. 29, 1896.

HELME. Des adénoïdites. *Soc. Franç. de Lar. et Otol.*, Paris, May 2, 1895.

HELME. Les sarcomes primitifs des fosses nasales. *Union Méd.*, Feb. 23, 1895.

HELME. Une nouvelle application de l'électricité à la rhinologie. Trépanation et massage électriques. *Méd. Moderne*, Dec. 12, 1894.

HERZFELD and HERMANN (Berlin). A new capsule bacillus found in the secretion of the nose and antrum of Highmore. *Hygienische Rundschau*, 1895, No. 14.

HEIT, J. E. A rapid and rational mode for the removal of hypertrophies of the inferior turbinate bone. *N.Y. Med. Journ.*, Vol LXIII., p. 178.

HEIT, J. E. Méthode rapide et rationnelle du traitement des hypertrophies des cornets inférieurs. *Pratique Méd.*, No. 13, 1896.

HEWETSON. Removal of adenoids. *Brit. Med. Journ.*, April 6, 1895.

HOPKINS. The recurrence of lymphatic hypertrophy in the naso-pharynx. Rep. Manhattan Eye and Ear Hosp., Jan., 1895.

JACQUIN. Anatomie pathologique des végétations adénoïdes. Pathogénie de leurs complications. Leur traitement. Union Méd. du Nord-Est, March, 1895.

JOAL. Recherches pathogéniques sur le rhume des foins. Rev. de Lar., Otol., et Rhin., April 1, 1895.

JOUSLAIN. Hématome de la cloison nasale produit par un traumatisme rare. Bull. et Mém. de la Soc. de Lar., Otol., et Rhin. de Paris, May, 1894.

JOUSLAIN. Présentation de cautères galvaniques destinés au pharynx nasale. Bull. et Mém. de la Soc. de Lar., Otol., et Rhin. de Paris, March, 1894.

JOUSLAIN. Remarques sur la syphilis tertiaire du nez. Arch. Int. Lar., Otol., et Rhinol., Jan. and Feb., 1896.

JOURDRAN. Un cas de *Lucilia vorax* observé à la Guyane ; 315 larves extraites des fosses nasales ; guérison. Arch. de Méd., Nov., 1895.

KEEGAN. Rhinoplasty in India. Brit. Med. Journ., Oct. 12, 1895.

KELLGREN. Massage vibratoire. Nouveaux mouvements dans le traitement manuel. Clin. franç., Sept. 10, 1894.

KNIGHT. Case of fibroma of nasal fossa. Rep. Manhattan Eye and Ear Hosp., Jan., 1895.

LAPBÉ. Sur un cas d'anosmie. Rev. Gén. de Clin. et Thérap., April 4, 1894.

LABIT. Un cas de condylôme syphilitique des fosses nasales. Soc. franç. de Lar. et Otol., Paris, May 3, 1895.

LACARRET. Abscès à répétition du plancher des fosses nasales. Ann. de la Policlin. de Toulouse, March, 1894.

LACARRET. Coryza nerveux rhinorrhée ; crises d'éternuement ; spasmes de la glotte. Ann. de la Policlin. de Toulouse, Jan., 1895.

LACARRET. De la syphilis tertiaire du nez chez l'enfant. Ann. de la Policlin. de Toulouse, Oct., 1894.

LACARRET. Hématome de la cloison des fosses nasales. Soc. franç. de Laryng., Rev. de Laryng., May 15, 1894.

LACROIX. Traitement des épaissements de la cloison des fosses nasales, sciés et trépanés électriques. Thèse de Paris, July, 1895.

LAGUESSE. Note rectificative à propos du développement du sinus maxillaire. Comptes-rendus Hebd. des Séances de la Soc. de Biologie, Nov. 2, 1894.

LAKER. Contribution à l'étude du massage vibratoire des muqueuses internes. Rev. Int. de Rhin., etc., June 25, 1894.

LANTIN, G. Ueber Fremdkörper der oberen Luftwege, und vier neue Fälle von Rhinolithen. Archiv für Laryngologie und Rhinologie, herausgegeben von Dr. B. Fränkel, Band 4, Heft 2.

LATAPIE. Traitement de l'épistaxis. Gaz. des Hôp., April 19, 1894.

LATHURAZ. Polype naso-pharyngien. Soc. des Sc. Méd. de Lyon, Lyon Méd., June 10, 1894.

LAURENS. Les queues de cornet. Arch. Int. Lar., d'Otol., et Rhinol., Jan. and Feb., 1896.

LAVRAND. Influence du séjour au bord de la mer sur les affections du nez, de la gorge et des oreilles. Congrès d'Hydroth. Marine, Boulogne-sur-Mer, July 27, 1894.

LAVRAND. Polype fibro-muqueux de l'arrière narine gauche pendant dans le cavum et détaché, par la fosse nasale, après malaxations. Journ. des Sc. Méd. de Lille, Oct. 27, 1894.

LAVRAND. Respiration nasale et buccale. La Voix, Parlée et Chantée, May, 1895.

LE BART. Le chancre primitif du nez et des fosses nasales. Thèse de Paris, June, 1894.

LECONITRE. Étude sur l'hypertrophie du segment postérieur des cornets du nez. Thèse de Paris, July, 1895.

LERMOYEZ. Des végétations adénoïdes tuberculeuses du pharynx nasal. Bull. et Mém. de la Soc. Méd. des Hôp. de Paris, July 26, 1894.

LERMOYEZ. Le coryza chronique simple. Union Méd., March 16, 1895.

LERMOYEZ. Les troubles de l'olfaction. Presse Méd., July 6, 1895.

LERMOYEZ. Pathogénie et traitement des rhinites spasmodiques (rhume des foins). Presse Méd., Dec. 22, 1894.

LERMOYEZ. Rhinologie, otologie, et laryngologie à Vienne. One vol., 539 pages. Paris: Carré. 1894.

LERMOYEZ. Traitement du coryza chronique simple. Mercredi Méd., June 27, 1894.

LERMOYEZ. Traitement de la syphilis nasale tertiaire. Presse Méd., April 13, 1895.

LERMOYEZ. Traitement du coryza aigu. Rev. Gén. de Clin. et Thérap., Jan. 26, 1895.

LERMOYEZ. Traitement de l'épistaxis. Presse Méd., Dec. 8, 1894.

LESEUR. De l'affection dite des foins. Thèse de Paris, 1895.

LEUKENHELD (Wiesbaden). Suppuration of the antrum of Hihmore. Münchener Med. Woch., No. 8, 1896.

LIEBE, G. Angeborene Verwachsung der Nasenöffnungen. Monats. für Ohrenheilk., Apr., 1896.

LIGÉOIS. La digitale dans l'hémoptysie et l'épistaxis. Rev. Gén. de Chir. et Thérap., Oct. 3, 1894.

LOEWENBERG. Le cocaïnisme chronique d'origine nasale. Bull. Méd., March 17, 1895.

LUC. Des suppurations du sinus frontal, et, en particulier, de leur traitement chirurgical. Sem. Méd., 1894, No. 35, and Arch. Int. de Laryng., Rhin., et Otol., July and August, 1894.

LUC. De l'étiologie des polypes muqueux des fosses nasales. Arch. Int. de Laryng., VIII., p. 5, 1895.

LUZET. Rhinologie, otologie, laryngologie à Vienne, d'après le Dr. Lermoyez. Arch. Gén. de Méd., Aug., 1894.

MAGNUS. Étude clinique des tumeurs adénoïdes : leur traitement chirurgical. Résultats post-opératoires. Thèse de Paris, June, 1895.

MAKAGE. Traitement médical des végétations adénoïdes. Acad. de Méd., Paris; Séance du 2 avril, 1895.

MARAI. Obturation prothétique d'un vaste abcès du sinus maxillaire. Guérison. Soc. de Méd. de Caen, in Année Méd. de Caen, June 15, 1895.

MARCHANDE. Des tumeurs adénoïdes du pharynx. Rev. Gén. de Clin. et Thérap., Feb. 14, 1894.

MARTON, G. DE. De la prothèse dans le traitement des fistules chirurgicales du sinus maxillaire. Arch. Int. de Lar., Rhin., et Otol., Jan. and Feb., 1895.

MARTIN. Guérison d'un empyème classique du sinus frontal par les injections antiseptiques. Présentation du malade. Journ. de Méd. de Bordeaux, May 5, 1894.

MARTIN. Tumeurs de l'orbite causées par une sinusite frontale. Soc. franç. d'Ophthal., May, 1894.

MASSÉLON. De la sclérectasie nasale dans la myopie. Soc. franç. d'Ophthal., May, 1894.

- MAUREL. Note sur l'action des vapeurs d'iodoforme contre le coryza. Soc. de Méd. de Toulouse, 1894.
- MAUREL. Emploi des vapeurs iodoformiques dans le coryza et la bronchite descendante. Soc. de Thérap., Séance du 14 novembre, Paris, 1894.
- MENDEL. Chancres syphilitiques des narines. Soc. franç. de Derm. et Syphil., Paris, Séance du 14 mars, 1895.
- MENDEL. De l'hypertrophie des cornets inférieurs. Ann. de Méd. Scient. et Prat., April 4, 1895.
- MENDEL. De l'ozène. Méd. Moderne, April 27, 1895.
- MENDEL. Rhinite syphilitique tertiaire ; rétention d'un volumineux séquestre pendant quatre ans et demie. Bull. et Mém. de la Soc. de Lar., Otol., et Rhin. de Paris, June and July, 1894.
- MENDEL. Syphilis héréditaire des fosses nasales. Soc. franç. de Derm. et Syph., March 8, 1894.
- MENDEL. Un cas d'ozène rhino-laryngo-trachéal. Soc. franç. de Laryng., May 2, 1894.
- MERMET. Fibro-sarcôme des fosses nasales faisant saillie dans le pharynx. Bull. de la Soc. Anat. de Paris, fasc. 13, July, 1894.
- MEYER, E. Bakteriologische Befunde bei Rhinitis fibrinosa. Archiv für Laryngologie und Rhinologie, herausgegeben von Dr. B. Fränkel, Band 4, Heft 2.
- MEYERSON, S. Nachtrag, betreffend Knochenblasen in der Nase. Archiv für Laryngologie und Rhinologie, herausgegeben von Dr. B. Fränkel, Band 4, Heft 1.
- MICHEL. Des abcès et fistules orbitaires dans le cours des sinusites frontales. Thèse de Lyon, 1895.
- MILBURY, F. S. A new nasal cutting forceps or couchotome. N.Y. Med. Journ., Vol. LXIII., p. 849.
- MIOT. Epistaxis grave ; guérison. Soc. franç. de Laryng. : Rev. de Laryng., June 1, 1894.
- MOLINIÉ. De l'emploi des lamelles de celluloïde dans le traitement des synéchies des fosses nasales. Soc. franç. de Laryng., April 30. Rev. de Laryng., Sept. 1, 1894.
- MOLINIÉ. L'asthme des foins et le coryza spasmodique. Thèse de Paris, 1894.
- MOLL, A. C. H. Die Behandlung der acuten Leiden der Nebenhöhlen der Nase. Monats. für Ohrenheilk., Feb., 1896, p. 74.
- MOLL. Du traitement des affections aiguës des cavités accessoires de la face. Soc. franç. de Lar. et Otol., Paris, May, 1895.
- MOLLIÈRE. Traitement de l'asthme des foins par l'eau de Cologne. Lyon Méd., Jan. 21, 1894.
- MONCORGÉ. Un cas d'ulcère perforant de la cloison et de mal de Bright. Rev. Int. de Rhin., March 10, 1894.
- MORAN. Considérations sur les abcès de la cloison des fosses nasales, de l'utilité de leur incision bâtive pour empêcher les déformations consécutives. Thèse de Bordeaux, 1894.
- MOUNIER. Du perchlorure de fer comme traitement de la rhinite chronique hypertrophique. France Méd., Jan. 19, 1894.
- MOURE. Comparaison entre l'électrolyse et les autres modes de traitement dans la destruction des déviations et éperons de la cloison nasale. Gaz. des Sc. Méd. de Bordeaux, 1894, No. 16.
- MOURE. Contribution à l'étude de l'ulcère perforant de la cloison nasale. Arch. Clin. de Bordeaux, April, 1894.
- MOURE. Des rhinolithes spontanées. Nécessité de pratiquer l'examen histologique et chimique. Rev. de Laryng., March 10, 1894.

MOURE. Sphénoïdite chronique avec ozène ; présentation de pièces. Bull. et Mém. de la Soc. d'Ophth., Lar., Otol., et Rhin. de Bordeaux et du Sud-Ouest, July and Oct., 1894.

MOURE et SABRAZÈS. Un point de la bactériologie des fosses nasales. Soc. franç. de Laryng., May 2, 1894.

MYLES, R. C. Diseases of the accessory nasal sinuses, with suggestions regarding their treatment. Med. News, March 28, 1896.

NÉLATON. Polypes naso-pharyngiens. Soc. de Chir. de Paris, Séance du 28 nov., 1894.

NOQUET. Sur un cas de rhinolithé. Soc. franç. de Lar., May 2. Rev. de Lar., Aug. 1, 1894.

OLSCHEWSKY. Sarcoma of the nasal fossa. Inaugural dissertation, Königsberg, 1895.

ONODI (Pest). Rhino-laryngological communications. Monats. für Ohrenheilk., 1895, No. 3.

ORTÉGA. Sur l'empyème des sinus frontaux. Thèse de Paris, 1895.

PANAS. Empyème du sinus maxillaire. Acad. de Méd., Séance du 12 mars, Paris, 1895.

PANAS. Empyème du sinus maxillaire compliqué d'ostéo-périostite orbitaire, avec perforation de la voûte, abcès du lobe frontal, et atrophie du nerf optique ; mort. Rev. Int. de Méd. et Chir. Prat., June 10, 1895.

PARKER. Rhinoplasty. Brit. Med. Journ., Mar. 21, 1896.

PASSY. De l'olfaction. Mode d'action des parfums. Presse Méd., Oct. 14, 1894.

PEAN. Des moyens prothétiques destinés à obtenir la réparation des parties osseuses. Gaz. des Hôp., March 15, 1894.

PEAUCELLIER. Influence des affections nasales sur le tube digestif. Gaz. Méd. de Picardie, 1894, No. 1.

PEAUCELLIER. Influence de l'air marin et emploi de l'eau de mer dans les affections naso-pharyngiennes. Congrès d'Hydroth. Marine, Boulogne-sur-Mer, July, 1894.

PERMEWAN, W. The naso-pharynx in relation to voice. Liv. Med. Chir. Journ., Jan., 1896.

PERRIN et ASLANIAN. Cavités du nez à l'état physiologique et dans l'eczéma pileux. Marseille Méd., Nov. 1, 1894.

PEYRISSAC. Un cas de syphilis tertiaire des fosses nasales. Bull. et Mém. de la Soc. d'Ophth., Lar., Otol., et Rhin. de Bordeaux et du Sud-Ouest, July and Oct., 1894.

PIGNATARI. Polype et abcès du sinus frontal. Rev. Gén. d'Ophthal., May 31, 1894.

PISSOT. Étude sur le lavage du rhino-pharynx et ses indications. Thèse de Paris, Feb., 1895.

PLICQUE. Traitement d'un accès d'asthme. Gaz. Méd. de Paris, June 30, 1894.

PLÜDER (Hamburg). Congenital diaphragms of a choan and asymmetry of the face. Festschrift des Aerztlichen Vereins in Hamburg, 1896.

QUÉNU. Polypes naso-pharyngiens. Soc. de Chir. de Paris ; Séance du 13 juin, 1894.

RAFIN. Tumeur nasale avec envahissement de l'orbite. Bull. Méd. du Dispensaire Gén. de Lyon, Dec. 15, 1894.

RYOULT. Empyème des cellules ethmoidales antérieures avec nécrose de la paroi osseuse de la naïne gauche et fistule externe. Soc. franç. de Lar., Otol., et Rhin. ; Séance du 2 mai. Rev. de Lar., Otol., et Rhin., June 1, 1894.

RAOULÉ. Polype fibro-muqueux de la cavité naso-pharyngienne. Rev. Méd. de l'Est, Oct. 15, 1894.

RAUGÉ. Le canal incisif et l'organe de Jacobson. Arch. Int. de Lar., Rhin., et Otol., July and August, 1894.

RAUGÉ. Sur un cas de rhinoscopie postérieure. Soc. franç. de Lar. et Otol., Paris, May 4, 1895.

RAUGÉ. Sur la chirurgie du sinus maxillaire et ses progrès depuis dix ans. Congrès franç. de Chir., Lyon, Oct., 1894.

RAUGÉ. Traitement de l'ozène. Soc. franç. de Lar., Otol., et Rhin.; Séance du 30 avril, 1894.

RÉGIS. Végétations adénoïdes et dégénérescence. Journ. de Méd. de Bordeaux, No. 31, 1894.

RÉTHIE. Considérations sur les neuroses vaso-motrices des voies aériennes supérieures. Rev. Int. de Rhin., Otol., et Lar., Sept. 25, 1894.

RETHI, L. Die Verbildungen der Nasenscheidewand in ihren örtlichen und allgemeinen Beziehungen. Bresgen's Sammlung, Heft 9.

RICE, C. In what manner can ulcerations of the nasal septum following operation and in atrophic rhinitis be healed to secure an even and moist surface? Med. News, Feb. 8, 1896.

RIPAULT. Ablation de végétations adénoïdes. Gaz. Méd. de Paris, Feb. 10, 1894.

RIPAULT. Les polypes muqueux (nez, arrière-nez, sinus). Gaz. des Hôp., Nov. 3, 1894.

RIPAULT. Papillome confluent des fosses nasales. Ann. Mal. de l'Oreille, Nov., 1895.

RIPAULT. Sur l'étiologie et le traitement de l'épistaxis. Gaz. Méd. de Paris, May 9, 1894.

RIPAULT. Trois cas d'empyème du sinus frontal. Ann. Mal. de l'Oreille, Nov., 1895.

RIPAULT. Un cas de rhinolithe. Ann. Mal. de l'Oreille, Dec., 1895.

ROUGIER. Du diagnostic visuel des végétations adénoïdes du pharynx par la pharyngoscopie antérieure et de leur ablation au lacet par les fosses nasales antérieures. Bull. Méd. du Dispensaire Gén. de Lyon, Jan. 15, Feb. 15, and March 15, 1894.

ROYET. Coryza avec erythème de la lèvre supérieure. Lyon Méd., Nov. 10, 1895.

RUAULT et PILLIET. Végétations adénoïdes des fosses nasales. Bull. de la Soc. Anatom. de Paris, fasc. 11, July, 1894.

RUEDA. Syphilôme primitif intra-nasal de forme anormale. Rev. de Lar., Otol., et Rhin., Feb., 1895.

SARREMONNE. Des malformations de la cloison du nez et de leur traitement. Thèse de Paris, July, 1894.

SCHEPFERGRELL. Le traitement de la rhinite hypertrophique par la méthode bipolaire d'électrolyse. Rev. Int. de Rhinol., V., p. 18, 1895.

SCHEPFERGRELL, W. The treatment of hypertrophic rhinitis by bipolar electrolysis. Ann. Ophth. and Otol., Vol. V., p. 390.

SCHIFFERS. De la pathogénie de croup non-infectieux de la muqueuse nasal. Rev. Int. de Rhin., Otol., et Lar., March 25, 1894.

SCHLEICHER. Demonstration eines galvano-caustischen Griffes mit Rheostat. Monats. für Ohrenheilk., Jan., 1896, p. 30.

SCHUSTER. Quelques remarques sur les suppurations des sinus profonds du nez. Rev. Int. de Rhin., Otol., et Lar., April 10, 1894.

SCHWARTZ. Plaies du crânes par balles de revolver, épistaxis à répétition, ligature des deux carotides externes, rabattement du nez et tamponnement des sinus sphénoïdaux, par on se faisait l'hémorrhagie venant sans doute de la carotide interne droite. Arch. Int. de Lar., Rhin., et Otol., July, 1894.

SENDZIAK. Contribution à la casuistique des tumeurs de la cavité nasopharyngienne. *Rev. de Lar., Otol., et Rhin.*, June 15, 1894.

SIEUR. Tumeurs adénoïdes. *Soc. des Sc. Méd. de Lyon*, in *Lyon Méd.*, April 8, 1894.

SIKKEL, A. Congenitales Fibroma der Nase. *Monats. für Ohrenheilk.*, Feb., 1896, p. 70.

SIKKEL, A. Demonstration eines Gypsalgusses des Oberkiefers bei Nasenverstopfung. *Monats. für Ohrenheilk.*, Feb., 1896, p. 69.

SIKKEL, A. Zwei Fälle von Rhinolith. *Monats. für Ohrenheilk.*, Feb., 1896, p. 69.

SPIVAK, C. D. Nasal affections as factors in chronic gastritis. *Philadelphia Polyclinic*, March 7, 1896.

STAMATIADIS. Traitement de certaines tumeurs malignes des fosses nasales par les voies naturelles. Thèse de Paris, July, 1895.

SHER. Researches on deviation of the nasal septum. Inaugural dissertation, Rostock, 1895.

STIPANIS. Entfernung der unteren Nasenmuschel. *Monats. für Ohrenheilk.*, Feb., 1896, p. 78.

STRANGWAYS, W. F. Hay-fever. A successful treatment founded on a new theory. *An. Ophth. and Otol.*, Vol. V., p. 199.

STRAUS. Présence du bacille de la tuberculose dans les cavités nasales de l'homme sain. *Acad. de Méd. de Paris*; Séance du 3 juillet. *Arch. de Méd. Expérim. et d'Anat. Pathol.*, July, 1894.

STRAUS. Sur la présence du bacille de la tuberculose dans les cavités nasales de l'homme sain. *Rev. de la Tuberculose*, Oct., 1894.

SULZER. De la névrite optique consécutive à l'ozène. *Soc. d'Opht. de Paris*, Séance du 8 jan., 1895.

SURMAY. Cas de déviation de la cloison. *Soc. de Chir. de Paris*; Séance du 2 jan., 1895.

SYOZYPIORSKI. Note sur un procédé simple pour arrêter l'épistaxis. *Gaz. des Hôp.*, Sept. 20, 1894.

TACQUET. Des voies lacrymales comme cause de l'origine nasale des affections oculaires. Thèse de Paris, April, 1894.

TANTIL. Des épistaxis des vieillards. Thèse de Paris, July, 1894.

TEXIER. Lupus primitif de la cloison nasale sans lésions cutanées. *Province Méd.*, Feb. 2, 1895.

TEXIER. Sur un nouveau mode d'administration du bromure d'éthyle en rhino-laryngologie. Contribution à l'étude physiologique de cet anesthésique. Thèse de Paris, March, 1895.

THIBERGE. Chancre syphilitique de la muqueuse nasale. *Gaz. Hebdom. de Méd. et Chir.*, April 28, 1894.

THOMAS. Des végétations adénoïdes. *Marseille Méd.*, Oct. 15, 1894.

THOMSON, STCLAIR, and HEWLETT. Preliminary communication on the fate of micro-organisms in inspired air. *Brit. Med. Journ.*, Jan. 18, 1896.

THOMSON, STCLAIR, and HEWLETT, R. T. The fate of micro-organisms in inspired air. *Lancet*, Jan. 11, 1896.

THOST (Hamburg). On the operations for adenoid vegetations. *Festschrift des Aerztlichen Vereins in Hamburg*, 1896.

THOST, A. Ueber die Symptome und Folgekrankheiten der hyperplastischen Rachenmandel. *Monats. für Ohrenheilk.*, Jan., 1896.

TISSIER. Complications et lésions anatomiques de l'ozène. *Ann. de Méd. Scient. et Prat.*, Jan. 17, 1894.

TISSIER. Considérations anatomiques sur l'ozène. *Ann. de Méd. Scient. et Prat.*, Jan. 31, 1894.

- TISSIER. De la rhinite hyperplasique. *Ann. de Méd. Sc. et Prat.*, Dec. 19, 1894.
- TISSIER, P. De la syphilis du nez. *Gaz. des Hôpitaux*, Nov. 20 and 23, 1896.
- TISSIER. Des coryzas à fausses membranes. *Gaz. des Hôp.*, March 17, 1894.
- TISSIER. Des rhinites aiguës chez le nouveau-né et chez les enfants. *Rev. Mens. des Mal. de l'Enfance*, Jan., 1894.
- TISSIER. Diagnostic et traitement de l'ozène. *Ann. de Méd. Scient. et Prat.*, March 28, and April 18 and 25, 1894.
- TISSIER. Mise en œuvre de la médication de l'ozène. *Ann. de Méd. Scient. et Prat.*, May 9, 1894.
- TISSIER. Pathogénie et étiologie de l'ozène. *Ann. de Méd. Scient. et Prat.*, Feb. 14 and 28, 1894.
- TOISON. Traitement des polypes du nez. *Journ. des Sc. Méd. de Lille*, Jan. 26, 1895.
- TRASK. Multiple polypi of the nasal accessory cavities. *Pacific Med. Journ.*, Jan., 1896.
- TROUSSART. Note sur les acariens parasites des fosses nasales des oiseaux. *Comptes-rendus Hebd. des Séances de la Soc. de Biol.*, Nov. 23, 1894.
- TUFFIER. Résection du maxillaire supérieur pour polype naso-pharyngien. *Soc. de Chir. de Paris*; Séance du 21 nov., 1894.
- UNDERWOOD. Artificial nose. *Brit. Med. Journ.*, June 1, 1895.
- VARIOT. Corps étranger dans la narine droite chez un enfant de deux ans. *Journ. de Clin. et Thérap. Infant.*, Oct. 25, 1894.
- VERGNIAUD. Rhinite catarrhale chronique de la région olfactive. Inflammation du sinus sphénoïdal et des cellules ethmoïdales postérieures. Anosmie. *Rev. de Lar., Otol., et Rhin.*, Sept. 1, 1894.
- VERNEUIL. Des causes de l'épistaxis juvénile. *Acad. de Méd. de Paris*, Séance du 29 mai, 1894.
- VERNEUIL. De l'abus des opérations dans le traitement des végétations adénoïdes. *Congrès d'Hydroth. Marine, Boulogne-sur-Mer*, July 26, 1894.
- VERNEUIL. Traitement des polypes naso-pharyngiens. *Soc. de Chir.*, Séance du 12 déc., 1894.
- VERNEUIL. Traitement médical des végétations adénoïdes du pharynx; rapport de cette affection avec la tuberculose. *Rev. de la Tuberculose*, Oct., 1894.
- WAGNIER. Bulle osseuse ethmoïdale compliquée de dégénérescence myxomateuse de la tumeur avec phénomènes nerveux consécutifs. *Rev. de Laryng.*, 18 Nov., 1895.
- VILLAR. Réparation d'une déformation nasale par la prothèse métallique. *Soc. de Chir. de Paris*, Séance du 1er mai; *Mercredi Méd.*, July 3, 1895.
- WAGNIER. Traitement des polypes muqueux et fibro-muqueux des arrière-narines et du pharynx. *Soc. franç. de Lar., Otol., et Rhin.*, Séance du 30 avril, 1894.
- WEED, C. R. Case of epithelial cancer of the nose of three years' standing, its treatment and cure. *Med. News*, Jan. 25, 1896.
- WILSON. Turbinal hypertrophy. *Brit. Med. Journ.*, Mar. 21, 1896.
- WOODS. Modification of the Indian rhinoplastic operation. *Brit. Med. Journ.*, April 18, 1896.
- YOUNG, H. D. A shielded chromic acid applicator. *Boston Med. and Surg. Journ.*, Jan. 23, 1896.
- ZARNIKO (Hamburg). Kakosmia subjectiva. *Festschrift des Aerztlichen Vereins in Hamburg*, 1896.

ZIEM. Le rôle des affections nasales dans les maladies infectieuses. *Rev. Int. de Rhin., Otol., et Lar.*, Dec. 25, 1894.

ZIEM. Note sur la valeur des miroirs métalliques. *Arch. Int. de Lar., Rhin., et Otol.*, Sept. and Oct., 1894.

ZIEM, C. Ueber Fremdkörper in der Kieferhöhle. *Monats. für Ohrenheilk.*, Jan., 1896.

ZUCKERKANDL. Anatomie normale et pathologique des fosses nasales et de leurs annexes pneumatiques. Traduction française de L. Lichtwitz et P. Garnault. Second vol. G. Masson, éditeur. Paris, 1895.

ZWILLINGER. Fremdkörper 8 Monatslang in der Nase. Foetid-eitriger Ausfluss. Asthma. *Monats. für Ohrenheilk.*, Jan., 1896, p. 31.

ZWAARDENAKER, H., and REUTER, C. Qualitative Geruchmessung. *Archiv für Laryngologie und Rhinologie*, herausgegeben von Dr. B. Fränkel, Band 4, Heft 1.

LARYNX, ETC.

BARCOCK. Considerations with regard to cough. *Canadian Pract.*, April, 1896.

BALL, J. B. Clinical lecture on cases from the throat department of the West London Hospital. *The Clin. Journ.*, April 8, 1896.

BAURÓWICZ, A. Ein gestielter Krebs des Kehlkopfs. *Archiv für Laryngologie und Rhinologie*, herausgegeben von Dr. B. Fränkel, Band 4, Heft 2.

BAURÓWICZ, ALEXANDER. Verengerung der Bronchien in Folge des Skleroms. *Archiv für Laryngologie und Rhinologie*, herausgegeben von Dr. B. Fränkel, Band 4, Heft 1.

BAYEUX, B. Note sur un perfectionnement des tubes courts. *Journ. de Clin. Inf.*, Nov. 14, 1895.

BÉDOS. De l'ictus laryngé essentiel. Thèse de Paris, 1895.

BERGENGRÜN, PAUL. Ein Kehlkopfdiaphragma. *Archiv für Laryngologie und Rhinologie*, herausgegeben von Dr. B. Fränkel, Band 4, Heft 1.

BERGGREN (Wien). Casuistic communications of the annual report of the children's hospital of the Wiener Polyclinic. *Archiv für Kinderheilk.*, No. 19, pp. 5 and 6.

BERNAYS, A. C. Commentary by Prof. B. Fränkel on the anatomical nomenclature. *Ann. Ophth. and Otol.*, Vol. V., p. 170.

BIANCHI and MASSEI. Sopra un caso d'afonia istero-traumatica. *Arch. Ital. di Otol.*, Jan., 1896.

BOULAY. Diagnosis and treatment of hysterical aphonia. *Gaz. Hebdom. de Méd.* Paris, 1 mars, 1896.

BROCKBANK. Pulsus paradoxus in acute laryngitis. *Brit. Med. Journ.*, May 11, 1895.

BRONDGEEST, P. Q. Die Behandlung von Lupus und Tuberculosis Laryngis in vorgeschrittenen Stadien. *Monats. für Ohrenheilk.*, Feb., 1896, p. 75.

BUNCH, J. L. A case of bilateral paralysis of the abductors of the vocal cords. *Lancet*, Feb. 29, 1896.

BURGESS. Glottic spasm before measles. *Brit. Med. Journ.*, Jan. 4, 1896.

CASSELL. A case of multiple papillomata of the larynx. *Rep. Manhattan Eye and Ear Hosp.*, Jan., 1895.

CHAPPELL. Laryngeal neoplasms. *Rep. Manhattan Eye and Ear Hosp.*, Jan., 1895.

CHAPPELL, W. F. The creosote treatment of tuberculosis of the upper air passages. *N.Y. Med. Journ.*, Vol. LXIII., p. 604.

CHEYNE, W. WATSON. The objects and limits of operation for cancer. *Lancet*, Feb. 22 and March 14, 1896, and *The Medical Society's Transactions*, Vol. XIX., 1896.

DANZIGER, F. Rachen und Kehlkopf-symptome bei der Polyneuritis (puerperalis). *Monats. für Ohrenheilk.*, April, 1896.

DAVIS, H. M. Laryngeal syphilis, with report of a fatal case. *Med. News*, Jan. 18, 1895.

DUDLEY. Surgical treatment of laryngeal tuberculosis. *Brooklyn Med. Journ.*, Jan., 1896.

EBSTEIN. Laryngeal stenosis by leucæmic infiltration. *Wiener Med. Woch.*, 1896, No. 22.

EHLICH, KARL. Primäres Carcinom an der Bifurcation der Trachea. *Monats. für Ohrenheilk.*, Mar., 1896.

EPHRAIM, A. (Breslau). Ueber die directe Laryngoscopie (Autoscopie). *Monats. für Ohrenheilk.*, Feb., 1896.

EPHRAIM, A. La laryngoscopie directe (autoscopie). *La Pratique Méd.*, Nov. 15, 1896.

ERSELBERG. Resection and suture of the trachea. *Deutsche Med. Woch.*, 1896, No. 22.

FLATAU, T. S. Sprachgebrechen des jugendlichen Alters in ihren Beziehungen zu Krankheiten der oberen Luftwege. *Bresgen's Sammlung*, Heft 8.

FRIEDRICH, E. P. Die elastischen Fasern im Kehlkopfe. *Archiv für Laryngologie und Rhinologie*, herausgegeben von Dr. B. Fränkel, Band 4, Heft 2.

GILDEA, P. F. Infiltration of the larynx. *The Med. Age*, Mar. 25, 1896.

GRAHAM, J. Report of a case of cedema of the glottis, following scarlet fever. *Med. News*, Feb. 8, 1896.

HENRY. Croup, intubation prolongée. *Bull. Méd. Nord*, Nov. 22.

HERYNG. Phenolum sulpho-ricinicum and its application in tuberculous and chronic diseases of the pharynx, larynx, and nose. *Therap. Monats.*, 1896, No. 5.

JEANNEL. Epithélioma du larynx, laryngectomie totale; guérison. *Arch. Méd.*, Toulouse, June 15, 1896.

KATZENSTEIN. Die Orthoskopie der Larynx. *Archiv für Laryngologie und Rhinologie*, herausgegeben von Dr. B. Fränkel, Band 4, Heft 2.

KIRSTEIN, A. Voltolini und die Autoscopie der Luftwege. *Monats. für Ohrenheilk.*, April, 1896.

KRAUS (Paris). Case of argyria of the skin following brushing the larynx with solution of nitrate of silver. *Allg. Wiener Med. Zeitg.*, 1896, No. 7.

KUMMEL, WERNER. Die Behandlung von Verengerungen des Kehlkopfs und der Luftröhre mit gläsernen Schornsteincanülen nach Mikulicz. *Archiv für Laryngologie und Rhinologie*, herausgegeben von Dr. B. Fränkel, Band 4, Heft 1.

KUTTNER, A. Local treatment of laryngeal phthisis. *The Med. Age*, Apr. 10, 1896.

LACK, H. L. Tracheotomy and its after-treatment. *The Clin. Journ.*, Mar. 25, 1896.

LEVI, L., et G. LAURENS. Un cas d'edème aigu primitif du larynx. *Archives de Méd.*, Dec., 1895.

LEVREY. Spasme de la glotte consécutif à la trachéotomie. *Journ. de Clin. Inf.*, Nov. 14, 1895.

L'intubation par la méthode de R. Bayeux. *Journ. des Praticiens*, Oct. 12, 1895.

MARFLAN and HALLE. Varicella of the larynx. *Rev. Mens. des Mal. de l'Enfance*, XIV., No. 1.

MARSH, F. Cicatricial stenosis of the larynx. *Brit. Med. Journ.*, April 25, 1896.

MASSEI, PROF. F. (Naples). Treatment of chronic laryngo-stenosis. *Archivi Ital. di Laringol.*, Jan., 1896.

MÉMAIL. Kehlkopfnarben nach hochgradigen tuberculösen Destructionen. *Monats. für Ohrenheilk.*, Feb. 1896, p. 79.

MESLAY et VAUVERES. De l'intubation du larynx dans le croup. *Rev. Mens. des Mal. de l'Enf.*, Mar., 1895.

MIDDLETON. Case of bulbar paralysis, etc. *Glas. Med. Journ.*, Jan., 1896.

MOLINIÉ. De la dysphagie dans la tuberculose laryngée, de son traitement. *Marseille Méd.*, Nov., 1895.

MOLL, A. C. H. Demonstration zweier Patienten mit Larynx-Tuberculose. *Monats. für Ohrenheilk.*, Jan., 1896, p. 25.

MORRIS, R. An interesting case of aphonia. *Brit. Med. Journ.*, Mar. 21, 1896.

MULHALL. Cigarette habit. *Montreal Med. Ch. Journ.*, Jan., 1896.

NEWMAN. Cases of tubercular laryngitis—recovery. *Glas. Med. Journ.*, April, 1896.

NIXON. Stenosis of trachea and bronchi due to syphilis. *Brit. Med. Journ.*, April 4, 1896.

NOQUET. Un cas de kyste de l'épiglotte. *Bull. Méd. Nord*, Nov. 9, 1895.

PIENIAZEK. Die Tracheoskopie und die tracheoskopischen Operationen bei Tracheotomirten. *Archiv für Laryngologie und Rhinologie*, herausgegeben von Dr. B. Fränkel, Band 4, Heft 2.

PLEUDER, F. Zwei bemerkenswerthe Fälle von Tuberculose der obersten Athmungswege. *Archiv für Laryngologie und Rhinologie*, herausgegeben von Dr. B. Fränkel, Band 4, Heft 1.

POYET. Traitement des papillomes diffus du larynx. *Pratique Méd.*, No. 19, 1896.

PRICE-BROWN. Diagnosis and treatment of suppuration of the antrum, with histories of cases. *Ann. Ophth. and Otol.*, Vol. V., p. 189.

RANSOM. Hysterical or functional. *Brit. Med. Journ.*, May 4, 1895.

REINJES. Demonstration eines Kranken, bei dem eine Geschwulst vom Larynx-Eingang entfernt worden ist. *Monats. für Ohrenheilk.*, Jan., 1896, p. 23.

RENIKE, F. Researches on the human vocal cord. *Festschrift der Medizin*, 1895, No. 12.

ROUX. Traitement des affections légères des voies respiratoires par les inspirations d'eau de Cologne. *Soc. des Sc. Méd. de Lyon*; in *Lyon Méd.*, Jan. 14, 1894.

RUAULT, A. Le phénol sulfuriciné dans la tuberculose laryngée.

SCHIEF. Fractures of the cartilages of the larynx. *Wiener Med. Woch.*, 1896, No. 17.

SIKKEL, A. Ein Fremdkörper im Kehlkopf. *Monats. für Ohrenheilk.*, Feb., 1896, p. 69.

SEMON, F. Clinical lecture on malignant diseases of the larynx. *The Clin. Journ.*, Feb. 26, 1896.

SENDZIAK. Rheumatic inflammation of the crico-arytenoid articulation. *Archiv. Ital. di Otol.*, 1896, Vol. IV., fasc. 2.

SENDZIAK, J. Entzündung der crico-arytenoidalen Gelenke rheumatischen Ursprungs. *Archiv für Laryngologie und Rhinologie*, herausgegeben von Dr. B. Fränkel, Band 4, Heft 2.

SHEDA, ALFRED. Larynxstenose bei einem Kinde, bedingt durch pseudo-leukämische Scheinhautinfiltration. *Archiv für Laryngologie und Rhinologie*, herausgegeben von Dr. B. Fränkel, Band 4, Heft 1.

STRAIGHT, H. A. A fish bone in the right pyriform space. *Ann. Ophth. and Otol.*, Vol. V., p. 186.

THOMPSON, J. A. Sarcoma of the larynx. *Med. News*, March 28, 1896.

THORNER. Autoscopie du larynx et de la trachea. *Pratique Méd.*, No. 14, 1896.

TROST. On the mode of infection in laryngeal tuberculosis, and some rare cases of healed laryngeal tuberculosis. *Monats. für Ohrenheilk.*, 1895, No. 2.

TILLEY, HERBERT. Case of functional aphonia, with special reference to so-called varicose veins at the base of the tongue. *Lancet*, Feb. 15, 1896.

TRIFILETTI, A. Experimental researches on the physiological pathology of the inferior laryngeal nerves. *Archiv. Ital. di Laringol.*, 1895, fasc. 3.

TURNER. Laryngeal tuberculosis. Application for. *Brit. Med. Journ.*, Feb. 29, 1896.

VAN ANROOY. Ein Fall von geheilter primärer Larynx-Tuberculose. *Monats. für Ohrenheilk.*, Jan., 1896, p. 29.

VON SOKOŁOWSKI, A. Ein Beitrag zur Pathologie und Therapie der chronischen hypertrophischen Entzündung des Kehlkopfes und der Luftröhre. (*Laryngo-tracheitis chronica hypertrophica*.) *Archiv für Laryngologie und Rhinologie*, herausgegeben von Dr. B. Fränkel, Band 4, Heft 2.

WAGGETT. Skiagraphy in determining the position of foreign bodies in and about the larynx. *Brit. Med. Journ.*, April 25, 1896.

WAGGETT. The skiagraph and cryptoscope in the diagnosis and treatment of foreign bodies in and about the larynx. *Brit. Med. Journ.*, April 18, 1896.

WEILL. La coqueluche n'est contagieuse qu'à sa première période. *Congrès de Méd. Interne*, Lyon, Oct., 1894.

WINSLOW, J. R. Stenosis of larynx with fibroma, following a razor cut. *Journ. Eye, Ear, and Throat Hosp.*, Baltimore, No. 1, 1896.

WOODBURY, F. A case of urticaria cedematosa with involvement of the air passages. *Philadelphia Polyclinic*, Feb. 15, 1896.

WOODS. Sequel to excision of the larynx. *Brit. Med. Journ.*, Jan. 4, 1896.

WRIGHT, A. G. Note on certain dermoid cysts. *Brit. Med. Journ.*, April 18, 1896.

WRIGHT, J. Recent laryngological and rhinological literature. Vol. LXIII., pp. 165, 827.

ZIEM, C. Zur Autoscopie des Kehlkopfes. *Monats. für Ohrenheilk.*, March, 1896.

ZWILLINGER, PROF. Kehlkopflähmung in Folge eines Processes an der Gehirnbasis. *Monats. für Ohrenheilk.*, Feb. 1896, p. 76.

ŒSOPHAGUS.

BOURLIER. Rétrécissement de l'œsophage par un kyste hydatique du pommion. *Bull. Méd. de l'Algérie*, Feb. 10, 1895.

CALNER. De l'œsophagotomie externe pour corps étranger. *Arch. de Méd. et Pharm. Milit.*, Feb., 1894.

CATON. Stricture of œsophagus; sarcomatous. *Brit. Med. Journ.*, Mar. 7, 1896.

DUTOURNIER. Cancer de l'œsophage, dégénérescence secondaire du foie. Tumeur de l'oreillette droite. *Bull. de la Soc. Anat. de Paris*, fasc. 26, Dec., 1894.

FAURE. De la mort subite dans les dilatations congénitales de l'œsophage. *Thèse de Paris*, Dec., 1894.

FÉLIZET. Corps étranger de l'œsophage. Pièce de monnaie restée sept jours chez un enfant de quatre ans. *Soc. de Chir. de Paris*; Séance du 23 mai, 1894.

FROELICH. Œsophagotomie pour corps étranger de l'œsophage. *Soc. de Méd. de Nancy*, Nov. 14; in *Rev. Méd. de l'Est*, Dec. 15, 1894.

FUNCK-BRENTANO. Vice de conformation de l'œsophage. *Bull. de la Soc. Anat. de Paris*, fasc. 17, July-Oct., 1894.

GAILLARD. De l'intervention sanglante dans le traitement des corps étrangers de l'œsophage (portion thoracique). *Thèse de Lyon*, June, 1894.

- GALLIARD, L. Les complications du cancer de l'œsophage. *La Méd. Moderne*, Mar. 20, 1896.
- GALLIARD, L. Les œsophagites. *La Méd. Moderne*, Avril 4, 1896.
- GANGOLPHIL. Œsophagotomie externe pour corps étranger de l'œsophage (portion thoracique); résultats éloignés. *Lyon Méd.*, Jan. 20, 1895.
- HALLION. Tumeur vermineuse de l'œsophage. *Bull. de la Soc. Anat. de Paris*, fasc. 18, Oct., 1894.
- HEYDENREICH. Blessure de l'œsophage. *Soc. de Méd. de Nancy*, Nov. 8; in *Rev. Méd. de l'Est*, Dec. 15, 1894.
- HEYDENREICH. Cancer de l'œsophage. *Soc. de Méd. de Nancy*; Séance du 27 juin; in *Rev. Méd. de l'Est*, Aug. 1, 1894.
- JACQUEMET. Cancer de l'œsophage. *Com. Méd. de Marseille*; in *Méd. Moderne*, Mar. 10, 1894.
- JUVARA. Sur un muscle diaphragmatico-œsophagien. *Bull. de la Soc. Anat. de Paris*, fasc. 3, Jan. and Feb., 1894.
- KUGELER. An interesting case of epithelioma of the œsophagus. *Pacific Med. Journ.*, April, 1896.
- MONNIER. Gastrostomie chez un enfant de quatre ans et demi par le procédé Frank-Villar, pour remédier à un rétrécissement infranchissable de l'œsophage dû à l'ingestion de potasse liquide. *Gaz. des Hôp.*, Mar. 14, 1895.
- MONNIER. Gastrostomie pour rétrécissement de l'œsophage. *Soc. de Chir. de Paris*; Séance du 19 décembre, 1894.
- MONNIER. Gastrostomie pour rétrécissement de l'œsophage. *Soc. de Chir. de Paris*; Séance du 19 déc., 1894.
- ORRILLARD. Rétrécissement cicatriciel de l'œsophage. Abscès dans le médiastin postérieur. Mort. *Bull. de la Soc. Anat. de Paris*, fasc. 6, Feb. and Mar., 1894.
- PAILLARD. Étude sur la forme ganglionnaire et l'épithélioma latent du pharynx et de l'extrémité supérieure de l'œsophage. Thèse de Paris, Mar., 1895.
- PITT. Epithelioma of an œsophageal pouch. *Brit. Med. Journ.*, Jan. 25, 1896.
- RAMOND. Rétrécissement cancéreux de l'œsophage. *Bull. de la Soc. Anat. de Paris*, fasc. 18, Oct., 1894.
- RONIER. Cancer de l'œsophage; gastrostomie. *Soc. de Chir. de Paris*; Séance du 13 juin, 1894.
- SCHRAUN (Lemberg). Case of œsophagotomy in a child one year old. *Wiener Med. Woch.*, 1895, No. 50.
- SCHMIEGELOW. Corps étrangers dans l'œsophage, extrait par pharyngotomie sous hyoïdienne. Guérison. *Rev. de Lar., Otol., et Rhin.*, May 1, 1894.
- SEGOND. Gastrostomie pour cancer de l'œsophage. *Soc. de Chir.*; Séance du 12 déc., 1894.
- TAYLOR, F. Malignant stricture of the œsophagus, with perforation of the aorta. *Lancet*, April 11, 1896.
- VIGOT. Diverticulum de l'œsophage. *Assoc. franç. pour l'Avanc. des Sciences*, twenty-third session, Caen, Aug., 1894.
- VILLAR. Rétrécissement cicatriciel de l'œsophage. Nouveau procédé opératoire de gastrostomie. *Soc. de Chir. de Paris*; Séance du 31 oct., 1894.

THYROID.

- ABRAM. Anatomy of thyroid gland. *Brit. Med. Journ.*, Feb. 15, 1896.
- ADENOI. Thyroidectomies. Ablation de goîtres. *Bull. Méd. du Dispensaire Gen. de Lyon*, Dec. 15, 1894.
- AUBERT. Du meilleur traitement chirurgical à appliquer aux goîtres parenchymateux, colloïdes, et kystiques. Thèse de Bordeaux, June, 1894.

- AMBROSINI. De l'épithélium du thymus. Thèse de Paris, June, 1894.
- ANGERER (München). Treatment of goitre by thyroid gland. Münchener Med. Woch., 1896, No. 4.
- BALLET et ENRIQUEZ. Goitre expérimental par injections souscutanées d'extrait thyroïdien. Bull. et Mém. de la Soc. Méd. des Hôp. de Paris, Nov. 22, 1894.
- BALLET et ENRIQUEZ. Nouveau cas de goitre expérimental par injection souscutanée d'extrait thyroïdien. Bull. et Mém. de la Soc. Méd. des Hôp. de Paris, Dec. 20, 1894.
- BALZER. Myxœdème traité par l'ingestion de corps thyroïde. Soc. franç. de Derm. et Syphil., Paris, April 20, 1895.
- BARBER and SHATTOCK. Dissemination of cystic thyroid growths. Brit. Med. Journ., Jan. 11, 1896.
- BARRY, J. Thyroid cysts and adenomata. Lancet, March 21, 1896, and Trans. of the Pathol. Soc., Vol. XLVII.
- BAUMANN. On the effect of thyro-iodine. Münchener Med. Woch., 1896, No. 20.
- BAUMAUNN (Freiburg-i.-Br.). On the normal existence of iodine in the animal body. Zeitschrift für Physiol. Chemie, Band 21.
- BAUMANN. On thyro-iodine. Münchener Med. Woch., 1896, No. 14.
- BAUMANN. Thyro-iodine. Münchener Med. Woch., 1896, No. 17.
- BÉCLÈRE. Un nouveau cas de myxœdème guéri par l'alimentation thyroïdienne. Le thyroïdisme dans ses rapports avec la maladie de Basedow et avec l'hystérie. Bull. et Mém. de la Soc. Méd. des Hôp. de Paris, Oct. 18, 1894.
- BÉRARD. Régression du goitre exposé à l'air. Soc. des Sc. Méd. de Lyon; in Lyon Méd., Mar. 31, 1895.
- BILLOT, C. Contribution à l'étude des canules à trachéotomie tombées dans les voies aériennes. Ann. Mal. de l'Oreille, March, 1896.
- BOUGLÉ. Tumeur du corps thyroïde. Bull. de la Soc. Anat. de Paris, fasc. 1, Jan. and Feb., 1895.
- BRINDEL. De la thyrotomie au point de vue de ses indications, de son manuel opératoire, et de ses suites. Thèse de Bordeaux, 1895.
- BRINDEL. Larynx de chien thyrotomisé depuis cinq mois et demi. Journ. Méd., Bordeaux, Nov. 10, 1895.
- BRISSAUD. Sur un cas de mort par exothyropexie pour un goitre exophtalmique. Méd. Mod., Feb. 24, 1894.
- BRISSAUD et SOUQUES. Un cas de myxœdème congénital traité et guéri par l'injection de corps thyroïde de mouton. Bull. et Mém. de la Soc. Méd. des Hôp. de Paris, April 19, 1894.
- BROOKE, H. G. Lupus cured by thyroid extract. Brit. Med. Journ., Mar. 28, 1896.
- CADÉAC et GUINARD. 1. Quelques remarques sur le rôle du thymus chez les sujets atteints d'une altération du corps thyroïde ou éthyroïde. 2. Contribution à l'étude de quelques modifications fonctionnelles releveur chez les animaux éthyroïdes. Comptes-rendus Hebdomadaires des Séances de la Soc. de Biol., June 22, 1894.
- CADÉAC et GUINARD. Quelques faits relatifs aux accidents de la thyroïdectomie. Comptes-rendus Hebdomadaires des Séances de la Soc. de Biol., June 8, 1894.
- CHAMBERLAIN. Contribution à l'étude de la maladie de Basedow, et en particulier de sa pathogénie et de son traitement. Thèse de Paris, April, 1894.
- CHANTEMESSE et RENÉ MANI. Myxœdème frusté; toxicité du liquide thyroïdien. Bull. et Mém. de la Soc. Méd. des Hôp. de Paris, Feb. 22, 1894.
- CHIBRET. Le salicylate de soude dans le goitre exophtalmique. Rev. Gén. d'Ophtal., Jan. 31, 1895.

- CLARK, C. K. Thyroid feeding in stupor. *Montreal Med. Journ.*, Dec., 1895.
- COMBY. Myxœdème chez une fillette de deux ans et demie ; traitement par la régime thyroïdien ; amélioration. *Méd. Infant.*, Oct. 15, 1894.
- COOKE. On some thyroid tumors. *Brit. Med. Journ.*, June 8, 1895.
- CRISTIANI. Effets de la thyroïdectomie chez les serpents. *Comptes-rendus Hebd. des Séances de la Soc. de Biol.*, Jan. 18, 1895.
- CRISTIANI. Effets de la thyroïdectomie chez les lézards. *Comptes-rendus Hebd. des Séances de la Soc. de Biol. de Paris*, Jan. 19, 1894.
- CRISTIANI. Étude histologique de la greffe thyroïdienne. *Comptes-rendus Hebd. des Séances de la Soc. de Biol.*, Nov. 16, 1894.
- DEBOVE. Goître exophtalmique. *Ann. de Méd., Scient. et Prat.*, June 20, 1894.
- DEBOVE. Myxœdème. *Ann. de Méd., Scient. et Prat.*, July 4, 1894.
- DELÉAGE. Sur le diagnostic du goître exophtalmique. *France Méd.*, June 8, 1894.
- DENNÉE. Des kystes du canal thyro-lingual. *Journ. de Méd. de Bordeaux*, Feb. 4, 1894.
- DILSHEIM. Morbus Basedowii. Inaugural dissertation. Zürich, 1895.
- DINKLER. On tissue changes during internal use of dried thyroid. *Münchener Med. Woch.*, 1896, No. 22.
- DOURDONI. Contribution à la pathogénie du myxœdème et de la maladie de Basedow. Quelques expériences relatives à la fonction de la glande thyroïde. *Méd. Moderne*, Mar. 10, 1894.
- DU BOUCHAT. Exothyropexie dans un cas de goître comprimant la trachée. Mort par pneumonie infectieuse. *Bull. de la Soc. Anat. de Paris*, fasc. 24, Nov., 1894.
- DUHAMEL. Contribution à l'étude du faux goître exophtalmique. Thèse de Paris, Mar., 1894.
- DURAND. Contribution à l'étude de la thyroïdectomie partielle dans le goître exophtalmique. Thèse de Paris, May, 1895.
- DURANT. Thyroïdite suppurée à pneumocoques Talamon-Fraenkel. *Bull. de la Soc. Anat. de Paris*, fasc. 13, July, 1894.
- DURR, MARTIN. Épithélioma du corps thyroïde ; métastase dans les plèvres et dans les deux humérus qui sont fracturés spontanément ; corps fibreux de l'utérus. *Bull. de la Soc. Anat. de Paris*, fasc. 7, March and April, 1894.
- DUPAGNIER. Thyroid medication in myxœdema. *New Orleans Med. and Surg. Journ.*, March, 1896.
- EDES, R. T. Exophtalmic goître treated with animal extracts, and especially extract of thymus. *Boston Med. and Surg. Journ.*, Jan. 23, 1896.
- ELKAN. On the clinical importance of abscesses of the neck. Inaugural dissertation, Berlin, 1895.
- EWALD. Etiology of strumitis. *Munchener Med. Woch.*, 1896, No. 27.
- EVANS. Experimental removal of the thyroid gland. *Montreal Med. Ch. Journ.*, Jan., 1896.
- FINLAYSON. Cretin child under thyroid treatment. *Glas. Med. Journ.*, May, 1896.
- FISHER. The relation between the thyroid gland and the female sexual organs. *Wiener Med. Woch.*, 1896, Nos. 6, 7, and 8.
- FORMANIK and HASKOVIC. Contribution on the function of the thyroid gland. *Klinische Zeit- und Streitfragen*, 1895, Heft 3 and 4.
- FRANK. Case of arial goître. *Münchener Med. Woch.*, 1896, No. 22.
- FRANKEL. On the active substances of the thyroid gland. *Münchener Med. Woch.*, 1896, No. 20.

- FRUITHIGHT. Case of cretinism; thyroid treatment. *Arch. Pediat.*, Feb., 1896.
- GAUDE. Le traitement thyroïdien dans le goître, le myxœdème, et le crétinisme, et en particulier dans le crétinisme endémique. Thèse de Bordeaux, Jan., 1895.
- GIGNON. De l'atrophie des goîtres par la mise à l'air et parallèle entre les opérations extra-thyroïdiennes et les interventions intra-thyroïdiennes. Thèse de Lyon, Jan., 1895.
- GLEY et NICOLAS. Premiers résultats de recherches sur les modifications histologiques des glandules thyroïdiennes après la thyroïdectomie. *Comptes-rendus Hebd. des Séances de la Soc. de Biol.*, Mar. 29, 1895.
- GLEY et PHISALIX. Note préliminaire sur les effets de la thyroïdectomie chez la salamandre. *Comptes-rendus Hebd. des Séances de la Soc. de Biol. de Paris*, Jan. 19, 1894.
- GLEY et ROCHON-DUVIGMAND. Contribution à l'étude des troubles trophiques chez les chiens thyroïdectomisés; altérations oculaires chez ces animaux. *Arch. de Physiol.*, No. 1, 1894.
- GLEY. Remarques au sujet de la communication de M. Laulainé sur la toxicité des urines des chiens thyroïdectomisés. *Comptes-rendus Hebd. des Séances de la Soc. de Biol.*, Mar. 9, 1894.
- GLEY. Accidents consécutifs à la thyroïdectomie chez deux chèvres. *Comptes-rendus Hebd. des Séances de la Soc. de Biol.*, June 8, 1894.
- GLEY. Sur l'action toxique de l'extrait thyroïdien. *Comptes-rendus Hebd. des Séances de la Soc. de Biol.*, Dec. 28, 1894.
- GLEY. Sur la suppléance supposée de la glande thyroïde par le thymus. *Comptes-rendus Hebd. des Séances de la Soc. de Biol.*, June 29, 1894.
- GLOVER. Etiology of goitre. *Brit. Med. Journ.*, July 13, 1895.
- GOTTLIEB. On the effect of thyroid gland preparations on dogs after removal of the thyroid. *Deutsche Med. Woch.*, 1896, No. 15.
- GUÉRIN. Contribution à l'étude du traitement du myxœdème. Thèse de Paris, July, 1894.
- GURBER. Iodine in the thyroid. *Münchener Med. Woch.*, 1896, No. 23.
- HARDY. Myxœdema. *Brit. Med. Journ.*, Feb. 12, 1896.
- HARRIS, THOMAS. Myxœdema. *Brit. Med. Journ.*, Feb. 15, 1896.
- HARTMANN. Un cas d'exothyropexie pour un goître suffocant. *Mercredi Méd.*, Mar. 13, 1895.
- HASKOVEC. Note sur l'examen microscopique des organes des trois lapins morts de cachexie thyroïdoprice. *Comptes-rendus Hebd. des Séances de la Soc. de Biol.*, Mar. 22, 1895.
- HEDDAMS. Case of acute strumitis caused by diplococcus Fränkel-Weichselbaum, with secondary metastatic pneumonia. *Münchener Med. Woch.*, 1896, No. 24.
- HENNIG. On thyro-iodine. *Münchener Med. Woch.*, 1896, No. 14.
- HOFFMEISTER. The consequences of extirpation of the thyroid gland. *Deutsche Med. Woch.*, 1896, No. 22.
- HUTCHINSON. Preliminary note on the active substance in the thyroid. *Brit. Med. Journ.*, Mar. 21, 1896.
- JACQUES. Contribution à l'étude du goître dans les Hautes-Alpes. Thèse de Lyon, Nov., 1894.
- JEANSELME. Sur la coexistence du goître exophtalmique et de la sclérodémie. Congrès de l'Assoc. franç. pour l'Avanc. des Sciences, Caen, Aug., 1894.
- JEANSELME. Sur la coexistence du goître exophtalmique et de la sclérodémie. *Mercredi Méd.*, Jan. 2, 1895.
- JEANSELME. Thyroïdites et strumites infectieuses. *Gaz. des Hôp.*, Feb. 2, 1895.

JOFFROY. Nature et traitement du goître exophtalmique. *Progres Méd.*, Dec. 23, 1893, Jan. 27 and Mar. 24, 1894.

KIFFIN. Acute bronchocele following influenza. *Brit. Med. Journ.*, June 22, 1895.

LACHARRIÈRE, LADREIT DE. Goître guéri par des injections d'iode à la surface du corps thyroïde. *Soc. de Méd. de Paris*; Séance du 28 juillet; in *France Méd.*, Aug. 17, 1894.

LAULANIÉ. Sur la toxicité urinaire après la thyroïdectomie double chez le chien. *Comptes-rendus Hebd. des Séances de la Biol. de Paris*, Mar. 2, 1894.

LEON. Emploi thérapeutique du corps thyroïde. *Gaz. des Hôp.*, Aug. 16 and 18, 1894.

LEBRETON. Myxœdème infantile. Traitement thyroïdien. *Bull. et Mém. de la Soc. Méd. des Hôp. de Paris*, Jan. 3, 1895.

LEBRETON et VAGUEZ. Un cas de myxœdème infantile. Traitement thyroïdien. Modification du sang. *Bull. et Mém. de la Soc. Méd. des Hôp. de Paris*, Jan. 17, 1895.

LEFELLE et MESLAY. Cancer primitif de la glande thyroïde. Phlébite cancéreuse du tronc veineux trachio-céphalique droit. *Bull. de la Soc. Anat. de Paris*, fasc. 9, May, 1894.

LIEN et BENSAUDE. Thyroïdite à pneumocoques post-pneumonique. Guérison. *Bull. de la Soc. Anat. de Paris*, fasc. 11, July, 1894.

LOWITZ. De la médication thyroïdienne au point de vue historique, physiologique, et thérapeutique. Thèse de Bordeaux, Dec., 1894.

MANGIN. Du traitement des goîtres par la médication iodée interstitielle. Technique opératoire. *Gaz. Méd. de Paris*, Jan. 13, 1894.

MAKEX. Sur un cas d'asphyxie sus aigüe mortelle par hypertrophie du thymus chez une fillette de deux mois et demi. *Bull. et Mém. de la Soc. Méd. des Hôp. de Paris*, May 31, 1894.

MARIE, PIERRE, et GUERLAIN. Sur un cas de guérison du myxœdème par l'ingestion de glande thyroïde de mouton, et sur les accidents qui peuvent survenir au cours du traitement thyroïdien. *Bull. et Mém. de la Soc. Méd. des Hôp. de Paris*, Feb. 15, 1894.

MARIE, PIERRE. Sur la nature de la maladie de Basedow. *Bull. et Mém. de la Soc. Méd. des Hôp. de Paris*, Mar. 1, 1894.

MARIE, PIERRE. Présentation d'une myxœdémateuse guérie par l'ingestion de glandes thyroïdes de mouton. *Bull. et Mém. de la Soc. Méd. des Hôp. de Paris*, May 24, 1894.

MARIE, PIERRE. Rectification au sujet du cas de myxœdème traité par le Dr. Canter, et présenté à la Société des Hôpitaux dans la séance du 18 mai, 1894. *Bull. et Mém. de la Soc. Méd. des Hôp. de Paris*, June 7, 1894.

MARQUEL. Quelques observations de goîtres traités par les injections interstitielles d'iodoforme et d'éther. *Rev. Int. de Rhin., Otol., et Lar.*, Aug. 25, 1894.

MAUCLAIRE. Notes sur la situation de l'isthme du corps thyroïde par rapport à la trachée. *Bull. de la Soc. Anat. de Paris*, fasc. 3, 1895.

MACKENZIE, BOOTH. A case of intralaryngeal tumour removed by thyrotomy. *Brit. Med. Journ.*, April 27, 1895.

MARSON. Lupus cured by thyroid extract. *Brit. Med. Journ.*, Mar. 21, 1896.

Mc KIE. Thymus treatment of exophthalmic goitre. *Brit. Med. Journ.*, Mar. 7, 1896.

MINEAU. Quelques mots sur la médication du psoriasis au moyen de l'extrait de corps thyroïde pris à l'intérieur. *Mercredi Méd.*, Aug. 8, 1894.

MIGNON. Contribution à l'étude de l'étiologie du syndrome de Basedow. Thèse de Paris, Jan., 1895.

MILLS. Experimental cachexia strumipriva. *Montreal Med. Journ.*, Dec., 1895.

MURRAY. After-history of the first case of myxœdema cured by thyroid extract. *Brit. Med. Journ.*, Feb. 8, 1896.

MURRAY. Some effects of thyroidectomy in lower animals. *Brit. Med. Journ.*, Jan. 25, 1896.

NESS, MIDDLETON, and FINLAYSON. Cases of sporadic cretinism. *Glas. Med. Journ.*, Feb., 1896.

NICOLAS. Exothyropexie pour goître suffoquant. *Soc. des Sc. Méd. de Lyon*; in *Lyon Méd.*, April 7, 1895.

NICOLAS. Note sur les effets de la thyroïdectomie chez la salamandre. *Comptes-rendus Hebd. des Séances de la Soc. de Biol. de Paris*, Jan. 19, 1894.

PAGE, R. C. M. Exophthalmic goître. *New York Polyclinic*, No. 2, 1896.

PÉTTIT. La greffe thyroïdienne dans le traitement du myxœdème. *Journ. de Méd. de Paris*, Jan. 21, 1894.

PEYXON et NOIR. Le dermatographisme électrique dans le goître exophthalmique. *Rev. Int. d'Électrother.*, Sept., 1894.

PIÉDECOCQ. La mort subite des nourrissons par hypertrophie du thymus. *Thèse de Paris*, July, 1894.

PONCET et JABOULAY. Manuel opératoire de l'exothyropexie. *Soc. de Chir. de Paris*; Séance du 28 mars, 1894.

PONCET et JABOULAY. Traitement chirurgical des goîtres par l'exothyropexie. Mécanisme de la résorption des goîtres exposés à l'air. *Mercredi Méd.*, Feb. 7, 1894.

POTAIN. Sur un cas de goître exophthalmique. *Journ. de Méd. et Chir. Ped.*, Aug. 10, 1894.

PREISACH. The effect of thyroid gland on tetany. *Pester Med. Chir. Presse*, 1895, Nos. 32 and 33.

PRENANT. Du développement organique et histologique du thymus de la glande thyroïde et de la glande carotidienne. *La Cellule*, X. 1.

RATJEN (Hamburg). Myxœdema idiopathicum. *Festschrift des Aerztlichen Vereins in Hamburg*, 1896.

RAVÉ. Traitement chirurgical des accidents myxœdémateux et crétinoïdes par le thyro-éréthisme. *Thèse de Lyon*, Dec., 1894.

RÉGIS. Un cas type de myxœdème congénital au début du traitement thyroïdien. *Mercredi Méd.*, Jan. 23, 1895.

RICHTER. The destruction of albumen during the use of thyroid tablets. *Centralbl. für Innere Med.*, 1896, No. 3.

RICARD. Fibro-sarcome du corps thyroïde. Suture circulaire du tronc veineux brachio-céphalique droit. *Soc. de Chir. de Paris*; Séance du 7 fév., 1894.

Roos (Freiburg-i.-Br.). On the influence of the thyroid gland on the body, and experiments on its active principle. *Zeitschrift für Physiol. Chemie*, Band 21.

ROUX (de Lausanne). Une nouvelle série d'opérations de goîtres. *Congrès franç. de Chir.*, Lyon, Oct. 9, 1894.

RUSSELL. Acute bronchocele following influenza. *Brit. Med. Journ.*, May 4, 1895.

SCHERK (Bad., Homburg). Functional relations of the thyroid gland to the genital organs. *Aerztliche Rundschau*, No. 3, 1896.

SCHOLZ (Graz). On the influence of thyroid treatment on the organism, especially in cases of Basedow's (Graves') disease. *Centralbl. für Innere Med.*, Nos. 43 and 44, 1895.

- SCHOLZ. Thyroid gland and morbus Basedowi. Med. Press, Feb. 22, 1896.
- SCHWARTZ. Absces tuberculeux du corps thyroïde. Arch. Int. de Lar., Rhin., et Otol., Nov. and Dec., 1894.
- SCHWARTZ. Absces tuberculeux du corps thyroïde. Rev. Gén. de Clin. et Thérap., Oct. 27, 1894.
- SCHWARTZ. Des kystes du corps thyroïde. Rev. Gén. de Clin. et Thérap., Jan. 26, 1895.
- SÉBILAU. Un mot d'histoire sur le muscle élévateur de la glande thyroïde de Samuel Thomas Semmerring (1794), ou muscle thyro-glandulaire de Quvara (Oct., 1894). Bull. de la Soc. Anat. de Paris, fasc. 26, Dec., 1894.
- SEMMOLA, D'AMORE, PULCONE, et GIOFFREDI. Lésions intestinales consécutives à la thyroïdectomie chez le chien. Congrès de Méd. Interne, Lyon, Oct., 1894.
- SHATTOCK, S. G. Exogenous adenomata of the thyroid gland. Lancet, March 21, 1896, and Trans. of the Pathol. Soc., Vol. XLVII.
- SIMON, CH. Note préliminaire sur l'évolution de l'ébauche thyroïdienne latérale chez les mammifères. Comptes-rendus Hebd. des Séances de la Soc. de Biol., Mar. 9, 1894.
- SIMON, PAUL. Sur un cas de mort rapide, consécutive à une hémorrhagie primitive du corps thyroïde. Rev. Méd. de l'Est, Feb. 1, 1894.
- SMERTON. Acute bronchocele following influenza. Brit. Med. Journ., May 18, 1895.
- SMITH, HUGH. Enlarged thyroid: disappearance of the gland followed by myxedema. Brit. Med. Journ., Jan. 4, 1896.
- SOLARY. Du traitement chirurgical du goitre exophtalmique. Thèse de Paris, July, 1894.
- SOLLIER. Un cas de maladie de Basedow rapidement amélioré par la galvanisation. Rev. Inter. d'Électrothérapie, July, 1894.
- STARR, ALLEN. On the nature and treatment of exophtalmic goitre, with special reference to the thyroid theory of the disease, and to the treatment by thyroïdectomy. Med. News, April 18, 1896.
- STÉFANI. Contribution à l'étude du traitement chirurgical du goitre exophtalmique. Thèse de Lyon, Dec., 1894.
- STOKES, SIR WILLIAM. Case of a large cystic bronchocele necessitating complete removal of the thyroid gland. Lancet, Jan. 4, 1896.
- TREIGSEL (Freiburg). Examinations in cases treated by thyroidin. Münchener Med. Woch., 1896, No. 3.
- THEILHABER. Relations of Basedow's disease to the female genital organs. Archiv. für Gynakol., 1895, No. 1.
- TUFFIER. Goitre exophtalmique et thyroïdectomie. Soc. de Chir. de Paris; Séance du 13 fév., 1895.
- TUFFIER. Traitement chirurgical du goitre exophtalmique. Gaz. Méd. de Paris, Mar. 23, 1895.
- VOISIN. Goitre exophtalmique très rapidement amélioré par la médication thyroïdienne. Guérison des symptômes concomitants du goitre et de l'exophtalmie. Bull. et Mém. de la Soc. Méd. des Hôp. de Paris, Oct. 25, 1894.
- VOISIN. Idiote myxœdémateuse améliorée par la greffe thyroïdienne et par l'alimentation thyroïdienne. Bull. et Mém. de la Soc. Méd. des Hôp. de Paris, Mar. 22, 1894.
- VINKE, H. H. Sporadic cretinism, with report of a case treated with thyroid extract. Med. News, March 21, 1896.
- WATKIN, BROWNE. Acute bronchocele after influenza. Brit. Med. Journ., June 8, 1895.

WILKE. Endemic propagation of goitre and cretinism in the Caucasus. *Münchener Med. Woch.*, 1896, No. 10.

WUTORMANN. Intrathoracic goitre. *Deutsche Festschrift für Chir.*, Band 43, Heft 1 and 2.

EARS.

ABBB, R. A case of carotid artery hæmorrhage with middle ear necrosis. *Arch. of Otol.*, Jan., 1896.

AGUANNO, DE. À propos d'une note sur les corps étrangers dans le conduit auditif. *Ann. des Mal. de l'Oreille, du Larynx, et du Nez*, Nov. 1894, No. 11.

ALDERTON, H. A. Remarkable improvement of the hearing following ossiculectomy in a case of otitis media and interna. *Ann. Ophth. and Otol.*, Vol. V., p. 342.

ALDERTON, H. A. The upper tone limit in the normal and diseased ear, as determined by the Galton whistle. *Arch. of Otol.*, Jan., 1896.

ALT, F. Sectionsbefund eines Falles von Morbus Ménièrei. *Monats. für Ohrenheilk.*, March, 1896, p. 137.

ANDERODIAS. Contribution au traitement chirurgical des otites chroniques suppurées rebelles par l'ouverture large des cavités de l'oreille moyenne. These de Paris, July, 1895.

ANGIÉRAS. Bourdonnements d'oreilles d'origine synesthésique. *Soc. franç. de Lar. et d'Otol.*, Paris, May 4, 1895.

ARSLAN. Ematome acuto del condotto uditivo esterno sinistro. *Arch. Ital. di Otol.*, 1896.

BABONE, T. Report of Fifth International Otological Congress, held in Florence. *Arch. of Otol.*, Jan., 1896.

BACON. Cas d'otite moyenne suppurative aiguë et d'affections mastoïdiennes, compliqué de glycosurie et de ce qu'on appelle un erysipele "blanc" occupant le cuir chevelu. Opération. Guérison. *Rev. de Lar. Otol.*, etc., April 15, 1895.

BARATOUX, J. De l'excision de l'étrier. *La Pratique Méd.*, Nos. 1, 2, 3, and 4, 1896.

BARBIER. Corps étrangers de l'oreille. *Journ. de Clin. et Thérap. Infant.*, Dec. 13, 1894.

BARBIER. Deux cas d'hématome du conduit auditif externe chez des enfants. *Journ. de Clin. et Thérap. Infant.*, April 5, 1894.

BARCLAY, R. Foreign bodies in the ear. *Med. News*, Jan. 11, 1896.

BARTH, A., and HARTMANN, A. Report on the progress of otology during the third quarter of the year 1895. *Arch. of Otol.*, Jan., 1896.

BASSOULS. La lecture sur les lèvres. *La Voix, Parlée et Chantée*, Sept., 1894.

BEC. De la nécrose du labyrinthe, et en particulier du limaçon. Thèse de Lyon, April, 1894.

BELL. Temporo-sphenoidal abscess after otitis media. *Montreal Med. Journ.*, Dec., 1895.

BELL, O. E. The care of children's ears. *Journ. of Eye, Ear, and Throat Hosp.*, Baltimore. No. 1, 1896.

BERGER. Oto-plastie dans les malformations congénitales du pavillon. *Rev. Int. de Rhin., Otol., et Lar.*, Nov. 10, 1894.

BEZOLD, F. The hearing power in cases of bilateral congenital atresia of the auditory canal, with rudimentary auricle. *Arch. of Otol.*, April, 1896.

BEZOLD, F. A further case of ankylosis of the stapes diagnosed in life, with autopsy and manometric and histological examination. *Arch. of Otol.*, Jan., 1896.

BING, A. Report on the Transactions of the Section of Otology of the Sixty-sixth Congress of the German Naturalists and Physicians, Vienna, Sept. 24 to 30, 1894. *Arch. of Otol.*, April, 1896.

BLEYER. Cécité acoustique et l'éducation de l'oreille. 1. En tant qu'agent pratique dans l'étude de l'acoustique. 2. Avec remarques préparatoires à l'éducation de la voix et à l'étude de la musique. *Rev. Int. de Rhin.*, etc., Nov. 25, 1894.

BONNIER. 1. Centres vestibulaires corticaux; la pariétale ascendante. 2. Homologation morphogénique de l'oreille interne. *Bull. et Mém. de la Soc. de Lar. et Otol. de Paris*, July, 1894.

BONNIER. 1. Le limaçon membraneux considéré comme appareil enregistreur. 2. Fonctions de la membrane de Corti. *Comptes-rendus Heb. des Séances de la Soc. de Biol.*, Mar. 1, 1895.

BONNIER. Orientation auditive. *Bull. et Mém. de la Soc. de Lar. et Otol. de Paris*, April, 1894.

BONNIER. Rapports entre l'appareil ampullaire de l'oreille interne et les centres oculo-moteurs. *Comptes-rendus de la Soc. de Biol.*, May 17, 1895.

BONNIER. Réflexes auriculaires. *Bull. et Mém. de la Soc. de Lar. de Paris* Feb., 1894.

BONNIER. Sur l'inertie des milieux auriculaires. *Comptes-rendus Hebd. des Séances de la Soc. de Biol.*, Feb. 8, 1895.

BONNIER. Sur les fonctions statique et hydrostatique de la vessie natatoire, et leurs rapports avec les fonctions labyrinthiques. *Soc. de Biol.*, Nov. 23, 1895.

BONNIER. Tension normale des liquides labyrinthiques et céphalo-rachidiens. *Comptes-rendus Heb. des Séances de la Soc. de Biol.*, Jan. 4, 1895.

BONTHUX. De l'étiologie otitique des certains cas de paralysie faciale dits à *frigore*. Thèse de Lyon, Dec., 1894.

BONYER. Traitement des surdités catarrhales à Cautarets. *Arch. Gén. d'Hydrologie*, 1894.

BOUSQUET. Deux cas déchirure du tympan simulant une fracture du crâne. *Arch. Clin. de Bordeaux*, Dec., 1894.

BOYER. L'importance relative des affections labyrinthiques et oculaires dans l'étiologie du vertige. *Ann. d'Ocul.*, Nov., 1895.

BOYER. La méthode auriculaire dans l'enseignement des sourds-muets, traitement pédagogique de la surdité. *La Voix, Parlée et Chantée*, Jan., 1895.

BRAISLIN, W. C. A case of living larvæ in the ear without previous suppuration. *Arch. of Otol.*, Jan., 1896.

BRINDEL. Méningo-encéphalites diffuse aiguë consécutive à une otite moyenne suppurée. *Soc. Anat. de Bordeaux*, Jan. 15, 1894.

BROCA. Abscès du cerveau et méningites consécutifs à des suppurations de l'oreille moyenne. *Bull. de la Soc. Anat. de Paris*, July 14, 1894.

BROCA. Le traitement des mastoïdites. *Arch. Int. de Lar.*, Feb., 1894.

BROCA. Opérations sur l'apophyse mastoïde. *Arch. Internat. de Laryng.*, Nov. and Dec., 1894.

BROCA. Quatre-vingt-sept trépanations de l'apophyse mastoïdes. *Congrès franç. de Chir. de Lyon*, Oct., 1894.

BROCA et LUBET-BARBON. Des suppurations mastoïdiennes et de leur traitement. *Steinhil*, Paris, 1895.

BRUCK. Syphilis des deux conduits externes. *Semaine Médicale*, Feb. 13, 1895.

BRUNNER, G. Contribution à l'utilisation des limites inférieure et supérieure du son, ainsi que de l'épreuve de Rinné et de Schwabach. *La Pratique Méd.*, Nos. 5, 6, 7, and 8.

BRUNNER, G. Ueber den sog. Ménière'schen Symptomenkomplex und die Beziehungen des Ohres zum Schwindel. *Haug's Sammlung*, Heft 10.

CANNIEU. Recherches sur les origines du nerf auditif, ses rameaux, et ses ganglions. *Rev. de Lar., Otol.*, April 1 and 15, 1894.

CANNIEU. Recherches embryologiques sur le nerf auditif des poissons osseux. *Journ. de Méd. de Bordeaux*, May 5, 1895.

CARTAZ. Deux cas de surdité hystérique. *Rev. de Lar., etc.*, June 1, 1894.

CHAMBELLAN. Observation de syphilis héréditaire de l'oreille moyenne. *Journ. de Clin. et Thérap. Infant.*, April 26, 1894.

CHAMBELLAN. Otite moyenne scléreuse syphilitique. *Assoc. franç. pour l'Avanc. des Sc.*, Caen, Aug., 1894.

CHAPPET. Notice historique sur l'instruction des sourds-muets. *Lyon Méd.*, Sept., 1894.

CHARLIER. Otite grippale avec paralysie. *Rev. Int. de Rhin.*, May 10, 1894.

CHIUCINI. Quattro casi di apertura involontaria del seno laterale. *Hidi Otol.*, 1895.

CLARKE, J. J. A case of subperiosteal mastoid abscess. *The Clin. Journ.*, Feb. 26, 1896.

CLAUDE. Ulcération sarcomateuse de l'oreille. *Bull. de Soc. Anat. de Paris*, Mar., 1894.

CLEMENS. Suppuration in the attic of the tympanum. *Rep. Manhattan Eye and Ear Hosp.*, Jan. 1895.

COCHERIL. Essai sur la restauration du pavillon de l'oreille. *Thèse de Paris*, Dec., 1894.

COCHERIL. Vaisseaux du pavillon de l'oreille. *Journ. des Sc. Méd. de Lille*, Mar. 2, 1894.

COLLET. Les troubles auditifs du tabes et la réaction électrique du nerf auditif. *Thèse de Lyon*, July, 1894.

COLLET. Les troubles auditifs du tabes. *Presse Méd.*, Jan. 12, 1895.

COLLET. Contribution à l'étude pathogénique des troubles auditifs du tabes. *Progrès Méd.*, Dec. 8, 1894.

COUÉTOUX. Du pansement de l'otite moyenne purulente chronique. *Ann. des Mal. de l'Oreille, etc.*, Oct. 10, 1895.

COURTADE. Anatomie, physiologie, et séméiologie de l'oreille. *Rueff*, Paris, 1894.

COURTADE. Curseur indicateur pour cathéter de la trompe. *Bull. et Mém. de la Soc. de Lar., Otol., Rhin. de Paris*, June and July, 1894.

COURTADE. 1. Manche-porte instruments à angle variable. 2. Manchon hermétique pour speculum de Siegel. *Bull. et Mém. de la Soc. de Lar., Otol., et Rhin. de Paris*, Jan., 1894.

COURTADE. Manuel pratique du traitement des maladies de l'oreille. *Paris, Maloine*, 1895.

COURTADE. Mensurations de la distance de la trompe d'Eustache à l'orifice antérieur du nez. *Arch. Int. Lar., Otol., et Rhinol.*, Jan. and Feb., 1896.

COURTADE. Modification dans la technique de la perforation de l'apophyse mastoïde. *Arch. Int. Lar., Otol., et Rhinol.*, Jan. and Feb., 1896.

COURTADE. Observation d'occlusion du conduit auditif; operation. *Ann. Mal. de l'Oreille*, Dec., 1895.

COURTADE. Nouveau mode de traitement des abcès du conduit auditif externe par le tubage. *Soc. de Thérap. de Paris*; séance du 14 fév., 1894.

COURTADE. Phlyctènes hémorragiques du tympan et du conduit auditif externe. Journ. de Méd. de Paris, Feb. 17, 1895.

COURTADE. Prophylaxie des maladies de l'oreille. Congrès des Soc. Sav., Paris, April, 1895.

COURTADE. Traitement des corps étrangers de l'oreille. Bull. Gén. de Thérap., April 30, 1895.

COYNE. Du sourd-muet et de son éducation. Arch. Clin. de Bordeaux, April, 1894.

COYNE et CANNIEU. Sur l'insertion de la membrane de Corti. Acad. des Sc., July 9, 1893.

DALEINE. Les paralysies faciales otitiques et de leur traitement chirurgical. Thèse de Paris, May, 1895.

DANTEU. Rétrécissement du champ auditif dans l'hystérie. Arch. de Méd. Navale et Coloniale, April, 1894.

DASQUE. Deux cas de surdité consécutive aux oreillons. Bull. et Mém. de la Soc. d'Ophthal., Lar., Otol., et Rhin. de Bordeaux et du Sud-Ouest, Nov. and Dec., 1894.

DEANESLEY. A case of aural pyæmia without sinus thrombosis, treated by ligature of the internal jugular vein and plugging of lateral sinus. Brit. Med. Journ., Apr. 13, 1895.

DÉLIE. Trois observations d'otorrhées chroniques avec complication de carie. Rev. Int. de Rhin., Otol., et Lar., Mar. 25, 1894.

DELORE. Sur l'éducation des sourds-muets. Soc. Nat. de Méd. de Lyon, Lyon Méd., April 15, 1894.

DELSAUX. Un cas de syphilis du labyrinthe. Rev. Int. de Rhin., Otol., et Lar., Mar. 25, 1894.

DELSTANCHE. Nouveaux instruments pour l'oreille et le nez (fin). Arch. Ital. di Otol., Rinol., e Laring., No. 3, 1895.

DEMMLER. Coup de feu du conduit auditif externe. Fracture du rocher. Déchirure par contre-coup des circonvolutions temporales moyenne et inférieure. Lésions latentes. Considérations sur l'intervention comme moyen de diagnostic dans les coups de feu du crâne. Gaz. des Hôp., Aug. 30, 1894.

DENCH. Utilité des opérations sur l'oreille moyenne pour améliorer la fonction de l'ome. Rev. de Lar., Nov. 1, 1894.

DENKER, A. A case of epithelioma of the cartilaginous and cutaneous meatus and auricle. Arch. of Otol., April, 1896.

DE ROALDES. Sur quelques particularités du nègre en otologie. Revue de Laryn., Dec., 1895.

DOR. Sclérodémie du pavillon de l'oreille. Soc. de Méd., Lyon; Lyon Méd., Jan. 20, 1895.

DUCELLIER. Le traitement de la phlébite du sinus latéral d'origine auriculaire par le curettage de ce sinus. Thèse de Paris, July, 1894.

ESCAT. De l'otite moyenne aiguë suppurée avec voussure du secteur postéro-supérieur du tympan. Arch. Internat. de Laryng. et de Rhinol., 1895, No. 4.

FAULDER-WHITE. Treatment of chronic otorrhea. Brit. Med. Journ. Mar. 28, 1896.

FRANCOTTE. Sursi-mutité hystérique guérie par la suggestion à l'état de veille. Communication faite à la Société Médico-Chirurgicale de Liège; Mercredi Médical, Oct. 3, 1894.

FRITH, W. H. A case of old fracture of the handle of the malleus with fibrous union. Philadelphia Polyclinic, Dec. 28, 1895.

FOUGERAY, HAMON DU. Du tamponnement méthodique du conduit auditif externe par la gaze iodoformée comme mode de pansement dans les affections

inflammatoires de l'oreille, et spécialement dans les suppurations de la caisse du tympan. Soc. franç. de Lar. et Otol., Paris, May 3, 1895; Sem. Méd., May 8, 1895.

FOUGERAY, HAMON DU. Règles à suivre dans l'ouverture des abcès mastoïdiens. Soc. franç. d'Otol. et Lar., Paris, April 30, 1894.

FOURNIER. Des accidents déterminés par la perforation du lobule de l'oreille. Journ. des Mal. Cutanées et Syphil., June, 1894.

GARNAULT. Anatomie chirurgicale du temporal. Gaz. Méd. de Paris, April 6, 1895.

GARNAULT. De la mobilisation profonde, et de l'extraction de l'étrier comme moyens de traitement des surdités dues à des lésions localisées dans l'oreille moyenne. Soc. de Biol., Dec. 7, 1895.

GARNAULT. Des effets produits chez le lapin et chez le pigeon par l'extraction de l'étrier ou de la columelle, et la lésion expérimentale du vestibule membraneux. Acad. des Sc., Nov. 25, 1895.

GARNAULT. Les maladies infectieuses dans leur rapports avec les maladies de l'oreille. Semaine Méd., 1894, No. 1.

GARNAULT. Le massage vibratoire dans les maladies de l'oreille. Clin. française, Feb. 28, 1894.

GARNAULT. Les interventions opératoires et leurs indications dans les affections du récessus épitympanique et de la région mastoïdienne. Clinique française, Oct. 25 and Nov., 1894.

GARNAULT. Peut-on tirer de la forme du crâne des conclusions sur les dispositions anatomiques rendant plus ou moins dangereuses les opérations sur le rocher? Comptes-rendus de la Soc. de Biol., Feb. 22, 1895.

GARNAULT. Précis des maladies de l'oreille. Doin, Paris, 1895.

GANGOLPHE et SIRAUD. De la voie préauriculaire dans les interventions sur le conduit auditif et le rocher. Rev. de Chir., April 10, 1895.

GELLÉ. Des pressions centripètes. Étude de Séméiologie Auriculaire, Paris, 1895.

GELLÉ. Des œdèmes phlegmoneux souscutanés préauriculaires. Soc. franç. de Lar. et Otol., Paris, May 4, 1895.

GELLÉ. Du désenchatonnement de l'étrier. Bull. et Mém. de la Soc. de Lar., Otol., et Rhin. de Paris, Jan., 1894.

GELLÉ. Du traitement de bourdonnements d'oreille. Tribune Méd., Aug. 30, 1894.

GELLÉ. Du traitement général dans les affections auriculaires. Ann. des Mal. de l'Oreille, etc., Oct., 1895.

GELLÉ. Erreurs dans l'examen de l'audition. Tribune Méd., 1894, No. 11.

GELLÉ. Instrument pour échaner le mur de la logette et ouvrir l'attique. Arch. Int. de Lar., Rhin., et Otol., Jan. and Feb., 1894.

GELLÉ. Les inhibitions auriculaires. Soc. franç. d'Otol. et Lar.; Séance du 2 mai, 1894.

GELLÉ. Sur l'acuité auditive et la portée de l'ouïe. Comptes-rendus Hebd. de la Soc. de Biol., Feb. 2, 1894.

GELLÉ. Torticollis *ab aure lusa*. Congrès de Méd., Lyon, Oct., 1894.

GELLÉ. Un cas de surdité subite par le baillement. Tribune Méd., May 29, 1895.

GÉRARD-MARCHANT. Abcès cérébraux d'origine otitique. Soc. de Chir., Dec. 26, 1894.

GERONZI. Emiplegia facciale d'origine otitica. Arch. Ital. di Otol., 1895.

GIAMPIETRO. Contribution au traitement de l'aphasie et de la surdi-mutité. La Voix, May, 1894.

GIRANDAU. Tabes bulbaire; ulcérations trophiques des oreilles et du nez. *Presse Méd.*, Oct. 27, 1894.

GLEASON. Opération intratympanique pour guérir la surdité. *Méd. Bull.*, 1895, No. 10.

GOMEZ, V. Tinnitus aurium and some results obtained in its treatment with conium hydrobromate. *Am. Ophth. and Otol.*, Vol. V., p. 86.

GRADENIGO. Ascesso cerebrale otitico. *Arch. Ital. di Otol.*, 1895.

GRADENIGO (de Turin). La sclérose auriculaire considérée comme une affection syphilitique au cours de la syphilis héréditaire tardive. Communication faite à la section otologique de la Réunion des Méd. et Naturalistes de Vienne, Sept., 1894; *Ann. des Mal. de l'Oreille, du Lar., et du Nez*, Nov., 1894, No. 11.

GRAND. De l'influence du climat sur les affections auriculaires et nasopharyngiennes. *Lyon Méd.*, Sept. 30, 1894.

GRADENIGO. Sulla trombosi del seno trasverso. *Arch. Ital. di Otol.*, 1893.

GRILLOT. Contribution à l'étude de l'anesthésie par le bromure d'éthyle, ses applications en oto-laryngologie. Thèse de Paris, June, 1894.

GRUBER. Abnormitäten am Schläfebein. *Monats. für Ohrenheilk.*, Jan., 1896, p. 21.

GRUBER, J. Bericht über die im Jahre 1895 ambulantisch behandelten Kranken. *Monats. für Ohrenheilk.*, April, 1896.

GRUBER, PROF. Coloboma auriculæ; gelungene Plastik. *Monats. für Ohrenheilk.*, Feb., 1896, p. 63.

GRUBER. Spätnaht nach künstlicher Eröffnung des Warzenfortsatzes. *Monats. für Ohrenheilk.*, Jan., 1896, p. 21.

GRUBER. Trépanation de l'apophyse mastoïde. Réunion secondaire de la plaie. Leçon recueillie par M. Maurel. *Rev. de Lar., Otol., et Rhin.*, Jan. 15, 1894.

GUDER. Contribution à l'étude de la toux réflexe, en particulier de la toux auriculaire. *Rev. de Lar., Otol., et Rhin.*, Mar. 15, 1894.

GUÉMENT. Otorrhée rebelle datant de 1888; nécrose du limaçon; opération de Stacke; guérison. *Ann. de la Policlin. de Bordeaux*, July, 1894.

GUÉMENT. Otorrhée rebelle datant de 1888; opérée en 1894; guérison. *Ann. de la Policlin. de Bordeaux*, July, 1895.

GUILLAUME. Corps étranger de l'oreille. *Soc. Méd. de Reims*, June 6; *Union Méd. du Nord-Est*, July, 1894.

GUILLAUME. La parole chez les sourds-muets. *Soc. Méd. de Reims*, Jan. 10; in *Union Méd. du Nord-Est*, Feb., 1894.

GUILLMIN. Notions d'acoustique. *La Voix, Parlée et Chantée*, Jan., 1894.

GUYE, A. A. G. Ueber eine eigenthümliche, noch nicht beschriebene Drehungsempfindung bei Labyrinthleiden. *Monats. für Ohrenheilk.*, Feb., 1896, p. 72.

GUYONET. Sur quelques cas de malformations des oreilles et des tumeurs congénitales de la région préauriculaire. Thèse de Bordeaux, July, 1894.

HAEREMANN, J. Die luetischen Erkrankungen des Gehörorgans. *Haug's Sammlung*, Heft 9.

HAGEDORN, M. Ueber Beziehungen von Allgemein-Krankheiten sowie von Nasen- und Hals-Leiden zum Gehörorgane. *Bresgen's Sammlung*, Heft 10.

HARRIS. Tinnitus aurium. *Rep. Manhattan Eye and Ear Hosp.*, Jan., 1895.

HARTMANN, A. Report of the progress of otology during the fourth quarter of the year 1895. *Arch. of Otol.*, April, 1896.

HAYDON. Intracranial abscess, otitic. *Brit. Med. Journ.*, Mar. 21, 1896.

- HEATH, F. C. Some sequels of la grippe. *The Med. Age*, Jan. 10, 1896.
- HEIMANN. Otite moyenne chronique purulente gauche; abcès cérébelleux latent. *Ann. des Mal. de l'Oreille*, etc., Nov. 11, 1894.
- HÉLOT. Fréquence de la surdité dans les écoles. *Normandie Méd.*, Mar. 15, 1895.
- HENGST, D. A. Acute otitis media as a complication of typhoid fever. *N.Y. Med. Journ.*, Vol. LXIII., p. 747.
- HENNEBERT. À propos d'un cas d'otite moyenne aiguë. *Rev. de Lar.*, Nov. 1, 1894.
- HERMET. Contribution à l'étude de la syphilis de l'oreille. *Soc. franç. de Derm.*, Dec. 13, 1894.
- HERMET. De l'eczéma du conduit auditif externe. *Soc. de Lar.*, Paris, May, 1894, and *Journ. de Méd. de Paris*, Jan. 27, 1895.
- HILL, WILLIAM. Prognosis in non-suppurative catarrh of the middle ear. *Brit. Med. Journ.*, May 2, 1896.
- ITARD. Rapports et mémoires sur le sauvage de l'Aveyron; l'idiotie et la surdité; avec une appréciation de ces rapports par De la Siauve; éloge d'Itard par Bousquet. Préface par Bourneville. 200 pages. *Progrès Méd.*, Paris, 1894.
- JANY. Du rapport des maladies de l'oreille moyenne avec les affections du rhino-pharynx. Thèse de Paris, July, 1894.
- JONES, CHARLES D. The importance of suppurative disease of the middle ear. *Med. News*, April 18, 1896.
- JOUSLAIN. Diapason électrique. *Bull. de la Soc. de Lar.*, Paris, June and July, 1894.
- JOUSLAIN. Surdité et cécité du côté droit survenus chez le coiffeur mauric. consécutivement à un coup de revolver qu'il reçut en pleine poitrine de l'anarchiste Henry; présentation du malade. *Bull. de la Soc. de Lar.*, etc., Paris, May, 1894.
- KAUFMANN. Ein Fall von perisinuösem Abscesse mit Pyämie, geheilt durch Operation. *Monats. für Ohrenheilk.*, March, 1896, p. 134.
- KNAPP, H. Further observation on the indications for mastoid operations in acute purulent otitis media, and its complications. *Arch. of Otol.*, Jan., 1896.
- KREIDL, A. Demonstration einer Katze, bei welcher er vor einem Jahre beide Nervi Acustici nach einer Modification der Ewald'schen Methode zerstört hatte. *Monats. für Ohrenheilk.*, March, 1896, p. 137.
- KUCHARZEWSKI. Un cas d'abcès du cerveau. *Progrès Méd.*, July 21, 1894.
- LABIT. Trois cas de maladie de Ménière. Traitement par les injections hypodermiques de pilocarpine. *Rev. de Lar.*, Sept. 1, 1894.
- LACHARRIÈRE, LADREIT DE, et A. CASTEX. Indications et contre-indications du traitement marin dans les affections des oreilles, du nez, et du larynx. *Congrès d'Hydrothérap. Marine*, Boulogne-sur-Mer, July 27; *France Méd.*, Aug. 3, 1894.
- LACHARRIÈRE, LADREIT DE, POLAILLON, et BROUARDEL. Des coups de feu au niveau de l'oreille. *Soc. Méd. Lég.*, Feb. 12; *Bull. Méd.*, Feb. 14, 1894.
- LACARRET. Cholestéatome de l'oreille moyenne. Trajet fistuleux. Vertige de Ménière. *Soc. franç. de Lar.*, Paris, May 3, 1895.
- LACARRET. Cholestéatome de l'oreille moyenne, trajet fistuleux, vertige de Ménière. *Bull. Soc. franç. d'Otol.*, XI., p. 209, 1895.
- LAGRANGE. Paralysie du droit externe consécutive à une fracture du rocher, *Bull. de la Soc. d'Ophth., Lar., Otol. de Bordeaux et du Sud-Ouest*, 1893, Nos. 11 and 12.
- LANGE, V. Kurzer Ueberblick über die im Gefolge der akuten eiterigen Mittelohrentzündung auftretenden häufigsten Affektionen des Warzenfortsatzes unter besonderer Rücksichtnahme auf Aetiologie und Behandlung. *Haug's Sammlung*, Heft 11.

LAKE. Excision of the ossicles and membrane in chronic suppuration of the middle ear. *Med. Press*, Feb. 22, 1896.

LANNOIS. Nécrose et sequestre du labyrinthe. *Soc. franç. de Lar.*, etc., May 1; *Rev. de Lar.*, July 1, 1895.

LANNOIS. Rupture du tympan chez un pendu. *Soc. franç. de Lar.*, May 3, 1895.

LARICQ. Du traitement des suppurations mastoïdiennes. Thèse de Paris, Nov., 1894.

LEDERMAN. The pharyngeal tonsil as an excitant in suppurative otitis. *Rep. Manhattan Eye and Ear Hosp.*, Jan., 1895.

LEDOUBLE. Malformation des muscles de l'oreille. *Journ. de l'Anat.*, 1894, No. 1.

LI. FORT. Un signe nouveau de certaines fractures de la base du crâne : otorrhagie croisée. *Gaz. des Hôp.*, Nov. 27, 1894.

LELOIR. Du rôle joué par les agents de la suppuration dans les déchirures du lobule de l'oreille, chez les malades porteurs de bouches d'oreilles. *Nord Méd.*, April 1, 1895.

LEMAIREY. Syndrome de Ménière guéri par la pilocarpine. *Ann. Mal. de l'Oreille*, Nov., 1895.

LERICHE. Trépanation du rocher pour balle de revolver. Huitième Congrès franç. de Chir., Lyon, Oct., 1894.

LERMOYEZ et HELME. De l'asepsie en otologie, rhinologie, et laryngologie, *Soc. franç. de Lar.*, Paris, May 4, 1895.

LERMOYEZ. L'oreille typhique. *Presse Méd.*, Mar. 18, 1894.

LICHTENBERG. Tympanitis acuta, Abscessus subduralis ; Operation, Heilung : zwei Falle. *Monats. für Ohrenheilk.*, Jan., 1896, p. 33.

LICHTWITZ et J. SABRAZES. Du cholestéatome de l'oreille. *Bull. Méd.*, Mar. 28, 1894.

LOEWENBERG. Traitement abortif du furoncle par la cautérisation ignée. *Bull. M. d.*, May 6, 1894.

LURET-BARON. Des localisations inflammatoires du temporal dans leurs rapports avec le développement anatomique de cet os. *Arch. Int. Lar., Otol., et Rhinol.*, Jan. and Feb., 1896.

LUC. Contributions à l'étude des mastoïdites de Bézold. *Arch. Intern. Lar., Otol., et Rhinol.*, Jan. and Feb., 1896.

LUC. De l'ouverture large des cavités de l'oreille moyenne comme traitement radical de certaines otorrhées rebelles. *Soc. franç. de Lar.*, May 2; *Arch. Int. de Lar.*, May and June, 1894.

LUC. Présentation d'un malade opéré d'ouverture attico-mastoïdienne pour une otite fongueuse ancienne, avec application de lambeaux cutanés sur la brèche osseuse. *Arch. Int. de Lar.*, Jan. and Feb., 1895.

LUC. Résultat d'une statistique de treize cas d'ouverture large des cavités de l'oreille pour la cure radicale d'otorrhées rebelles. *Soc. franç. de Lar.*, Paris, May 2, 1895.

MCCONACHE, A. D. Anomalous loss of hearing, with restoration by an operation. *Journ. of Eye, Ear, and Throat Hosp.*, Baltimore, No. 1, 1896.

MACKENNA. Chloride of ammonium vapour in middle ear disease. *Brit. Med. Journ.*, Oct. 19, 1895.

MAHERIEL. L'évidement pétro-mastoïdien dans le traitement des suppurations de l'oreille moyenne. Thèse de Paris, April, 1895.

MARCHAL. Contribution à l'étude des tumeurs malignes primitives de l'oreille moyenne. Thèse de Paris, May, 1895.

MARINISCO. Origine des fibres vaso-motrices du nerf grand auriculaire chez le lapin. *Arch. de Pharmacodynamie*, 1894, No. 1.

- MARSH, F. Cholesteatoma of mastoid. *Brit. Med. Journ.*, April 25, 1896.
- MARTIN et LUBET-BARBON. Rapport sur le traitement des suppurations mastoïdiennes. *Soc. franç. de Lar.*, May 2, 1894.
- MASSINI, PROF. GUILIO, and POLIMANTI, OSVALDO. Relation existing between lesions of the auditory organs and the metabolic respiratory exchanges. A paper read before the International Congress of Otolology, Florence, Sept. 25, 1895. *Bollet. delle Malatt. dell' Orecch.*, etc., Feb., 1896.
- MASSINI, PROF. GUILIO, and POLIMANTI, OSVALDO. Relation between lesions of the auditory organs and metabolic tissue exchanges. Communication read before the International Congress of Otolology, Florence, Sept. 25, 1895. *Bollet. delle Malatt. dell' Orecch.*, etc., Feb., 1895.
- MAYET. Quelques considérations sur le développement du conduit auditif externe. *Bull. de la Soc. Anat. de Paris*, fasc. 26, Dec., 1894.
- MENDEL. Troubles réflexes produits par la présence de bouchons cérumineux. *Rev. Gén. de Clin. et Thérap.*, July 28, 1894.
- MÉNIÈRE. Observation d'un corps étranger du conduit auditif externe. *Bull. et Mém. de la Soc. de Lar., Otol., et Rhin. de Paris*, June and July, 1894.
- MÉNIÈRE. Sarcôme ossifiant chez un enfant de huit ans. *Méd. Moderne*, May 2, 1894.
- MERMET. Fibro-chondrome calcifié du pavillon de l'oreille. *Bull. de la Soc. Anat. de Paris*, fasc. 27, Dec., 1894.
- MERMOD. Des bourdonnements d'oreilles perceptibles à distance. *Rev. Int. de Lar.*, Mar. 25, 1894.
- MIDDLETON. Case of bilateral facial paralysis with absolute deafness. *Glas. Med. Journ.*, Jan., 1896.
- MIDDLETON. Case of old-standing left facial paralysis. *Glas. Med. Journ.*, Jan., 1896.
- MIGNON. Abscès otitique du cerveau. *Soc. de Chir. de Paris*; Séance du 17 oct., 1894.
- MILLIGAN. Sarcomata of the ear. *Brit. Med. Journ.*, March 28th, 1896.
- MIOT. Quelques remarques sur la mobilisation de l'étrier. *Soc. franç. de Lar.*, May 1; *Rev. de Lar.*, July 15, 1894.
- MIOT et BARATOUX. "Traité Théorique et Pratique des Maladies de l'Oreille et du Nez." Cinquième partie des "Maladies de l'Oreille Moyenne." 744 pages. Battaille et Cie., Paris, 1894.
- MIOT et HERCK. Traitement des bourdonnements d'oreilles. *Soc. franç. de Lar. et Otol.*, Paris, May 1, 1895.
- MOLINIÉ et DAURIAC. Un cas d'otorrhagie double au cours de la fièvre typhoïde. *Soc. franç. de Lar. et Otol.*, Paris, May 4, 1895.
- MOLL, A. C. H. Zwei Patienten operirt nach Zaufal. *Monats. für Ohrenheilk.*, Jan., 1896, p. 28.
- MONRO, T. K. Section of hard fibroma from hen's ear. *Glas. Med. Journ.*, June, 1896.
- MONTALESCOT. Le chlorure de zinc dans le traitement de l'otite moyenne suppurée chronique, granuleuse. Thèse de Paris, May, 1894.
- MOREL-LAVALLÉE et DÉLÉAGE. Impetigo du lobule de l'oreille. *Soc. franç. de Derm.*, Paris, Mar. 8, 1894.
- MOUNIER. 1. De la synergie auriculaire exagérée. 2. De l'électrisation dans certaines affections auriculaires. *Soc. franç. de Lar. et Otol.*, Paris, May 3 and 4, 1895.
- MURRAY, R. W. Temporo-sphenoidal abscess. *Brit. Med. Journ.*, Mar. 7, 1896.
- NICHOLS. Analysis and notes of 824 ear cases. *Rep. Manhattan Eye and Ear Hosp.*, Jan., 1895.

NOUËT. Polype volumineux de l'oreille droite. *Rev. Int. de Rhin., Otol. et Lar.*, April 10, 1894.

PANCHEP. Du traitement des furoncles du conduit auditif. Thèse de Paris, Mar., 1895.

PARK, J. W. Aural vertigo. *Ann. Ophth. and Otol.*, Vol. V., p. 107.

PECK. Gangrene of the ear and face complicating pertussis. *Arch. Pediat.*, April, 1896.

PES, O., and GRADENIGO, G. A contribution to the study of acute inflammation of the middle ear produced by the bacillus pyocyaneus. *Arch. of Otol.*, April, 1896.

PIQUÉ. Complications cérébrales de l'otite moyenne. Rapport sur une observation de Mignon. *Soc. de Chir., Paris*; Séance du 19 déc., 1894.

PIQUÉ. L'otite et les abcès encéphaliques. *Soc. de Chir. de Paris*; Séance du 2 jan., 1895.

PIERRE. De la nature des maladies dites scrofuleuses des yeux, des oreilles, du nez, du pharynx, et de leur traitement au bord de la mer à Berik. Thèse de Paris, Jan., 1895.

PLANAT. Du syndrome de Ménière chez les jeunes sujets. Thèse de Lyon, Jan., 1895.

POLITZER. Le traitement de l'otite moyenne suppurée. *Rev. Gén. de Clin. et Thérap.*, Jan. 17, 1894.

POLITZER. Ueber Knochendefecte in der äusseren Atticwand. *Monats. für Ohrenheilk.*, March, 1896, p. 135. (Demonstration mehrerer hierauf bezüglichen Präparate).

POLITZER. Demonstration pathologisch-anatomischer Präparate. *Monats. für Ohrenheilk.*, Jan., 1896, p. 22.

POLYAK, L. Report of the Meetings of the Hungarian Otological and Laryngological Society. *Arch. of Otol.*, April, 1896.

PRITCHARD, URBAN. The treatment of polypi and granulations. *Arch. of Otol.*, Jan., 1896.

PROMPT. Étude sur les fonctions de l'oreille interne. *Dauphiné Méd.*, Mar., 1894.

RANDALL, B. A. The importance of recognizing labyrinthine deafness. *Philadelphia Polyclinic*, Feb. 8, 1896.

RAOULT. Otite moyenne compliquée de pénétration de larves de mouches dans le conduit et dans la caisse du tympan. *Rev. Méd. de l'Est*, Feb. 1, 1894.

RAFFEL. Le cathétérisme des trompes d'Eustache rendu pratique par l'usage de la sonde palatométrique. *Broch. de 8 pages*, Paris, 1894.

REINHARD. Zwei Patienten nach Panse-Koerner operirt. *Monats. für Ohrenheilk.*, Jan., 1896, p. 27.

ROCHON. Chancre induré du lobule de l'oreille. *Méd. Moderne*, July 21, 1894.

RONGIER. Otites grippales. *Bull. Méd. et Adm. du Dispensaire Gén. de Lyon*, April 15, 1894.

ROYER. Du traitement des maladies chroniques de l'oreille, du nez, du pharynx, et du larynx au moyen de l'eau minérale de Challes. *Broch. de 40 pages*, Impr. Savoissienne, Chambéry, 1895.

SAINT-MARTIN. De la voie préauriculaire dans les interventions sur le conduit auditif et le rocher. Thèse de Lyon, Dec., 1894.

SECHER, WALKER. A case of double mastoid disease with septic thrombosis of the lateral sinus. *Brit. Med. Journ.*, April 13, 1895.

SCHEIBE, A. A contribution to the diagnosis and treatment of cholesteatoma in otitis media purulenta chronica. *Arch. of Otol.*, April, 1896.

- SCHIFFERS. Traumatisme de l'oreille. Rev. Int. de Rhin., Otol., et Lar., Mar. 25, 1894.
- SCHMIEGELOW. Corps étranger dans la cavité tympanique. Extraction. Tétanos. Rev. de Lar., Otol., et Rhin., Mar. 1, 1894.
- SCHWAGER. Ein Fall von objectiv wahrnehmbarem Ohrgeräusch. Monats. für Ohrenheilk., Feb., 1896.
- SHEPPARD, J. E. Three cases of hysterical mastoiditis. N.Y. Med. Journ., Vol. LXIII., p. 603.
- SHIELD, M. The treatment of severe mastoid disease by the implantation of skin flaps. Lancet, Feb. 8, 1896.
- SOMERS, L. S. Acetanilid as an antiseptic in chronic suppurative otitis. Med. News, April 4, 1896.
- SOUZA-LEITE. Des polypes de l'oreille et de leur traitement. Thèse de Paris, Mar., 1895.
- STAES-BRAME. De l'emploi de l'électricité dans le traitement des affections chroniques de l'oreille moyenne. Bull. Soc. franç. d'Élect., June, 1895.
- STERN, L. Contributions to the bacteriology of otitis media purulenta. Arch. of Otol., April, 1896.
- STETTER. VII. Jahresbericht vom 1 Jan., 1895, bis 1 Jan., 1896, aus dem Ambulatorium für Ohren-, Nasen-, und Mund-Krankheiten. Monats. für Ohrenheilk., March, 1896.
- SZENES, S. Caries Mastoidea in Folge von Influenza. Monats. für Ohrenheilk., Feb., 1896, p. 80.
- THOMAS. Note sur le traitement de l'otite interne. Rev. de Lar., Otol., et Rhin., Sept. 15, 1894.
- TUFFIER et TUCKER. Trois abcès centraux à streptocoques consécutifs à une otite moyenne. Trois trépanation suivies de succès temporaires, méningite suppurée. Mort. Bull. de la Soc. Anat. de Paris, fasc. 7, March and April, 1894.
- URBANTSCHITSCH, PROF. Case of exfoliation of the entire cochlea. Monats. für Ohrenheilk., Feb., 1896, p. 67.
- URBANTSCHITSCH, PROF. Revolver shot in the posterior wall of the meatus. Monats. für Ohrenheilk., Feb., 1896, p. 66.
- URBANTSCHITSCH, PROF. Two fatal cases of sequelæ of suppuration of the middle ear, with autopsies. Monats. für Ohrenheilk., Feb., 1896, pp. 65, 66.
- URQUHART, R. A. Two cases of abscess in the mastoid region associated with diabetes mellitus. Med. News, March 21, 1896.
- VAN DYCK. Hysterical or functional deafness. Brit. Med. Journ., May 4, 1895.
- VACHER. Note sur un cas d'otite moyenne double avec complications de délire furieux. Soc. franç. de Lar. et Otol., Paris, May 2, 1895.
- VARIOT. Malformations congénitales du pavillon de l'oreille et de l'oreille externe chez des enfants. Journ. de Clin. et Thérap. Infant., May 10, 1894.
- VIDAL. Collection vermineuse (ascarides) développé dans l'épaisseur de l'apophyse mastoïde et ouverte spontanément à l'extérieur. Journ. de Clin. et Thérap. Infant., Sept. 27, 1894.
- VILLAR. Deux cas de surdité consécutive aux oreillons. Gaz. Hebdom. de Sc. Méd. de Bordeaux, Feb. 3, 1895.
- VON STEIN, S. On the disturbance of equilibrium in diseases of the ear. Arch. of Otol., Jan., 1896.
- WALKER, DOWNIE. A case of acquired total deafness, the result of inherited syphilis, with *post-mortem*. Arch. of Otol., Jan., 1896.
- WALKER, DOWNIE. Case of sudden loss of hearing—syphilitic. Glas. Med. Journ., Jan., 1896.

WEIL, E. Die akute, eiterige Mittelohrentzündung und ihre Behandlung. Haug's Sammlung, Heft 8.

WERHOWSKY, B. Examen de la durée de perception des sons composant l'échelle tonique dans les cas d'affection de l'oreille interne et de l'oreille moyenne. La Pratique Méd., Nos. 8, 9, 10, 11, and 12, 1896.

WERHOWSKY, B. Examination of the duration of hearing throughout the musical scale in diseases of the internal and middle ear. Arch. of Otol., April, 1896.

WILKIN, G. C. Aural polypi, their symptoms, diagnosis, and treatment. The Clin. Journ., March 25, 1896.

WILSON, N. L. Purulent discharge from the middle ear. Vol. LXIII., p. 416.

WOODS. Extra-dural abscess. Brit. Med. Journ., Jan. 4, 1896.

WOODWARD, J. H. Purulent otitis media, abscess in the cerebellum: death, autopsy. Arch. of Otol., Jan., 1896.

ZUCKERKANDL, PROF. Beiträge zur vergleichenden Anatomie der Ohrtrompete. Monats. für Ohrenheilk., Feb., 1896.

ZUCKERKANDL, E. Beiträge zur vergleichenden Anatomie der Ohrtrompete. Monats. für Ohrenheilk., Feb., March, 1896.

ZWAARDEMAKER, A. Einige seltene Gehorsfehler. Monats. für Ohrenheilk., Feb., 1896, p. 72.

ZWAARDEMAKER, A. Ueber die zum Telephoniren mit den Reichs-Apparaten erforderliche Hörscharfe. Monats. für Ohrenheilk., Feb., 1896, p. 71.

ZWAARDEMAKER, A. Ueber Toynbee's Otoscop. Monats. für Ohrenheilk., Feb., 1896, p. 70.



